DIGITAL CONE CLEANUP
Users Guide

A Program for Data Editing of .cpt files

**This program should only be used by professionals who understand the impact
and reason for the changes that can be made using it.**

**It is strongly recommended to save the original data as captured and to save
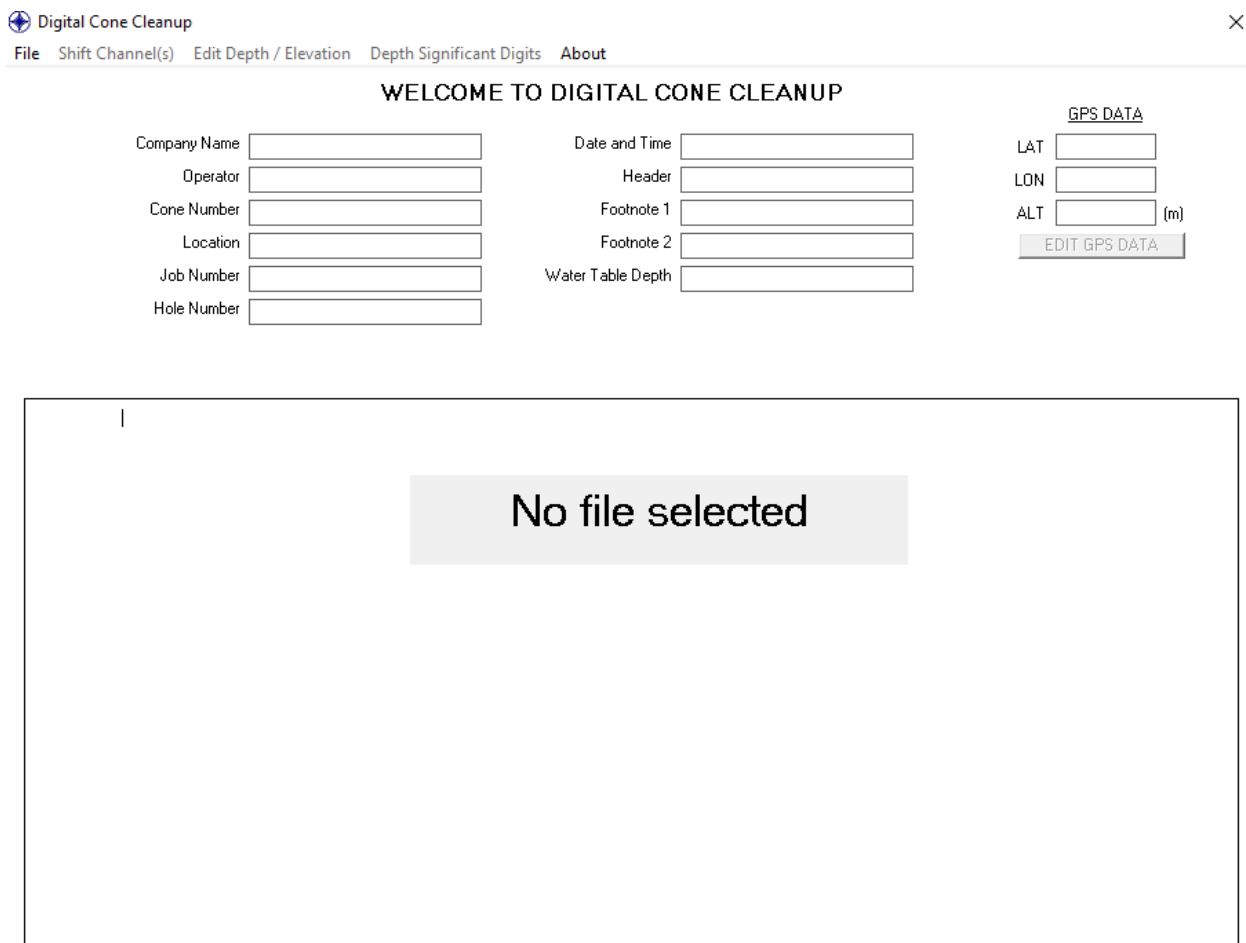edited files clearly identified as such.**

1. Introduction

The Digital Cone Cleanup program is designed to allow users to edit sounding files produced with the VERTEK HT Series Digital CPT system.

Using Cleanup, users can edit the header information and individual data points. Users can also delete depth counts that were recorded erroneously and change units for each individual channel.

Data files can also be exported to the old Hogentogler analog cone format. This can be useful if the user has spreadsheets or programs that are geared to the old analog format.

Figure 1 shows the opening screen.

Figure 1

2. Opening a *.CPT Data File

To open a file, click on File on the menu bar and then click on Open. The Open File dialog box in figure 2 will appear.   Choose a sounding file and click open.
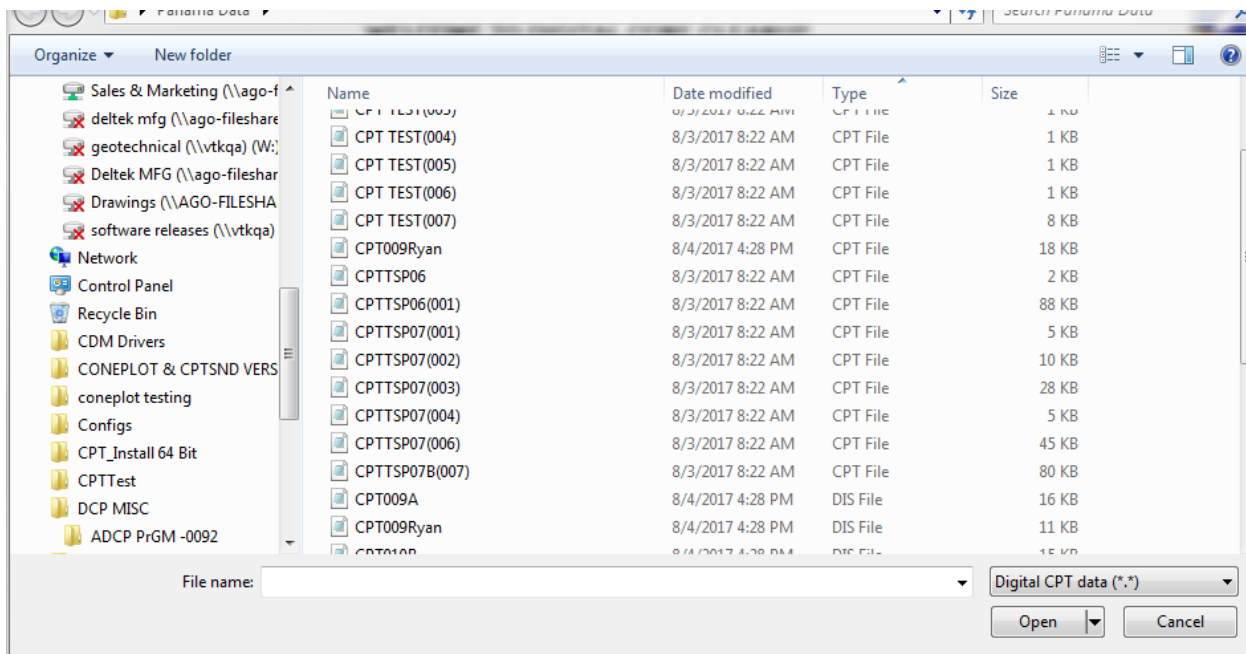

Figure 2

3. Main Screen

Once a file is loaded, the header information and the data will be displayed on the screen (figure 3). The header information and the individual data points can be edited. To do so, click on the text of the header information or the data point and enter the new data. There are two exceptions, however. The depth of a reading cannot be edited. The depth cannot be edited because ConePlot (VERTEK's CPT plotting program) expects each depth to follow sequentially from the previous. The GPS data can be edited using the EDIT GPS DATA button

Figure 3

However, individual depth counts can be deleted. To select a depth count, click on the depth. The depth and the associated readings (tip, friction, pressure, etc…) will be highlighted. Notice that the highlighted friction reading is normally a few readings back. This is because of the friction delay. If the depth is not shown, click on the depth column and use the up or down arrow keys to navigate. If a depth is red, it is because Cleanup believes that it may have been taken in error. A depth will be flagged if the speed is either 0 or greater than 10 cm/sec. This does not necessarily mean that the depth count is erroneous, however if there is more than one in a row, there is a strong possibility.

NOTE: to navigate put the cursor on a depth entry and use up/down arrows. To change a specific data point move the cursor to the entry and double click to highlight (speed and depth can not be edited)

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4. Changing Units

When a file is loaded, the applicable units are loaded too. Units can be changed by clicking on the dropdown box at the top of each channel (figure 4). When the file is saved, it will be saved with the new units. The depth units can be changed between meters and feet, however the file can only be saved in meters.

Figure 4

5. Shift Channels

Entire channels can be shifted by clicking the SHIFT CHANNELS tab on the tool bar and entering the appropriate data in the block for the channel you want to shift and then clicking on shift readings. This is normally used to correct for an incorrect baseline or to remove a negative section of test while keeping the relationship of all the datapoints the same.

This same function allows the trained user to simply remove a series of negative readings without shifting the entire column. See figure 5

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SHIFT CHANNEL(S)

	FINAL BASELINE	LOWEST READING	SHIFT CHANNEL BY	
TIP	Not Available	4.9	0	TSF
FRICTION	Not Available	0.005	0	TSF
PRESSURE U2	Not Available	-13.43	0	PSI
X Incl	Not Available	-0.98	0	deg
Y Incl	Not Available	0.89	0	deg
TEMP	Not Available	29.83	0	C

TO SHIFT CHANNELS, ENTER OFFSET INTO 'SHIFT CHANNEL
BY:' BOX AND CLICK 'SHIFT READINGS'

<OR>

CLICK ON 'REMOVE NEGATIVES' TO REMOVE JUST THE NEGATIVES
AND ZEROS WITHOUT SHIFTING THE OTHER READINGS

WARNING: THIS FUNCTION WILL NOT PERFORM ANY ERROR CHECKING

SHIFT READINGS   REMOVE NEGATIVES   CANCEL

| 30.0 | 0.059 | -12.12 | -1.08 | 1.82 | 30.19 |

Figure 5

ONLY TRAINED DATA INTERPRETERS SHOULD MAKE THESE CHANGES and any changed files
should be saved as such. It is important to always maintain the raw data files for future reference.

6. Edit Depth/Elevation

The Start Depth/Elevation function (shown in figure 6) allows you to correct the depth readings by simply
entering a new start depth. This function changes all the readings in the column in one edit. Very useful for
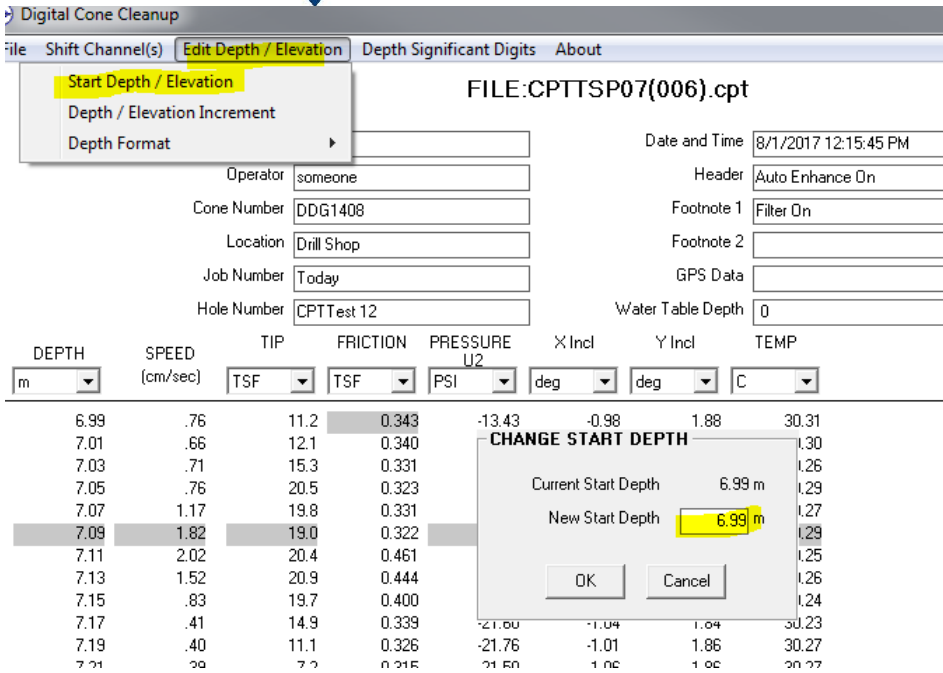test sites requiring CPT tests to start in predrilled holes.

Figure 6

The Depth/Elevation Increment function (figure 7) allows the interpreter to change the distance between each depth reading and should only be used when it is known that the original setup in the CPT Data Acquisition software was improper.
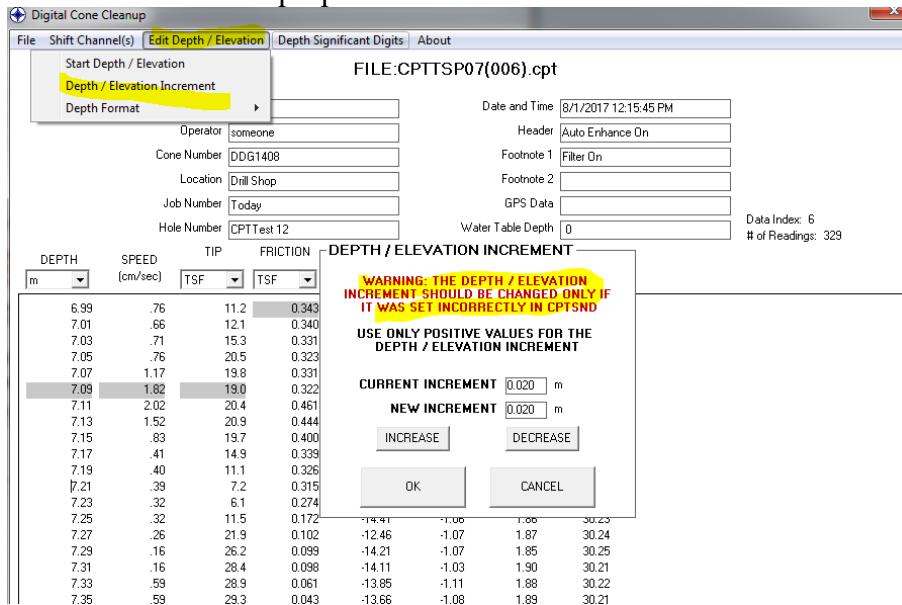

Figure 7

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The last function under Edit Depth/Elevation simply allows the user to change the depth format between depth and elevation. Simply click on the format desired then be sure to update the starting depth/elevation as shown above.

7. Saving a File

Once the file is edited it can be saved. Click on File on the menu bar and then click on Save. The Save File dialog box will open. Select a new filename and press OK to save.

8. Exporting Data

The data can be exported to the old Hogentogler analog cone file format. The exported data can be used with the University of British Columbia's Interpretation program or other programs.

To export the data, click on File on the menu bar and then click on Export. The screen in figure 8 will appear. Choose the units and press OK to save the file. NOTE: There are five analog file formats. Each format has specific units for each channel. If the channel is using units other than the one specified for the selected file format, Cleanup will change that channel's units to fit the analog file format.
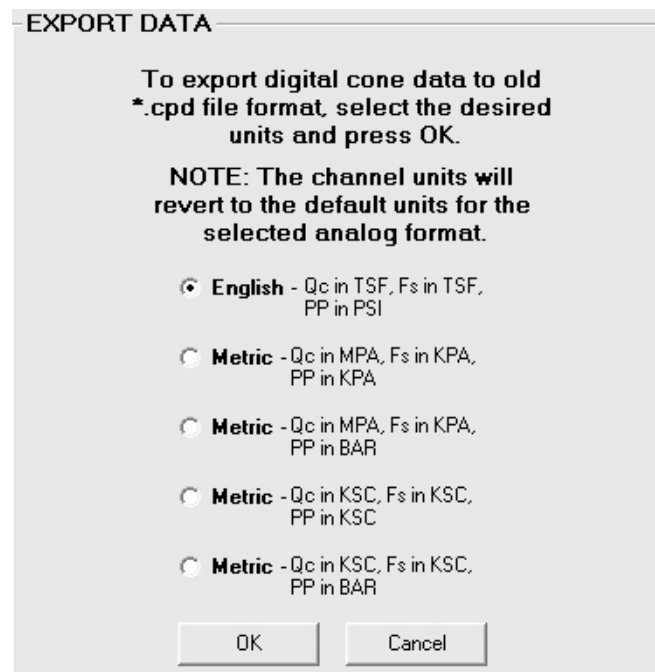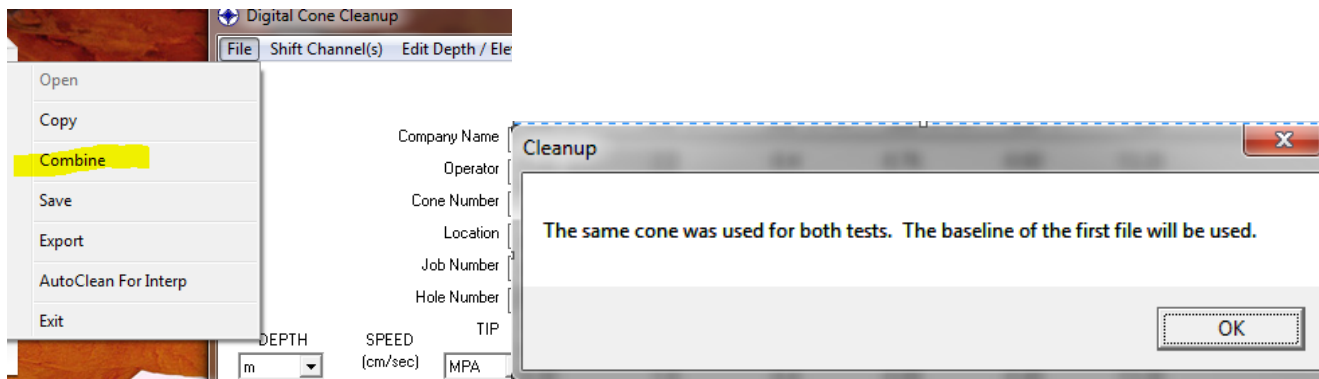

Figure 8

To export the data to other formats use CONEPLOT after saving the files in CLEANUP

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9. Combining Files

Two files can be combined using "Combine Files" (under FILE in the toolbar)   Select the first file normally in cleanup and then click on Combine Files to add in the second. Pop up boxes will advise if the files have differences that need to be fixed (such as one file in depth format and the second in elevation).   A pop up will mention if the same or different cones are used and let you know which test baselines will be used, then click okay

Once the files have processed (occasionally this will take a minute or so) a box like figure 9 will appear   .
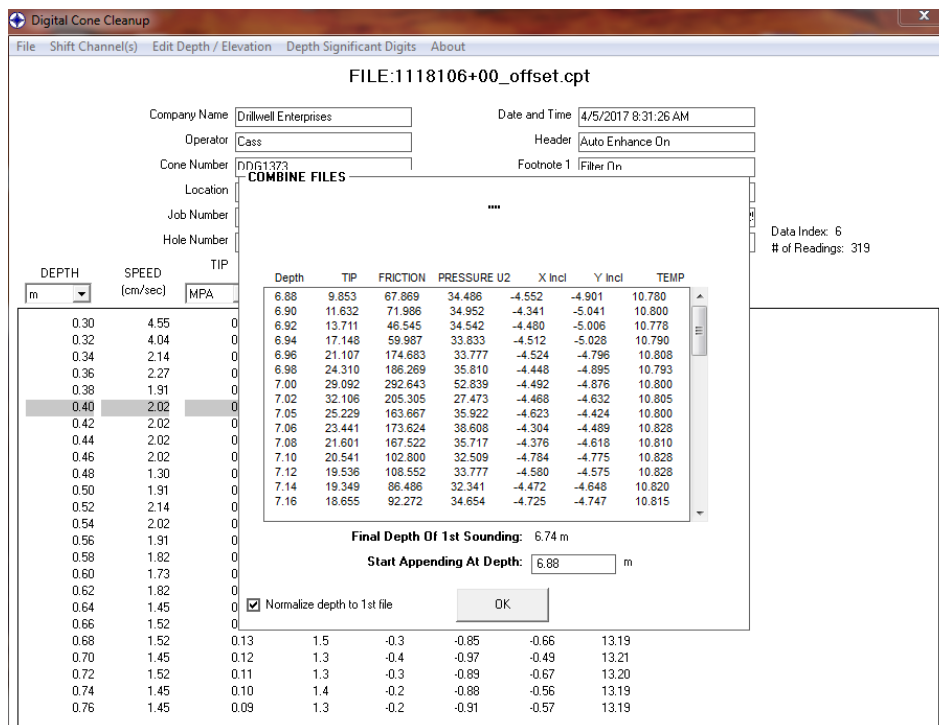
Figure 9

Enter the appropiate depth based on the sounding notes and click okay.The files are now combined. Simply save this file as a new name and process with CONEPLOT should no further edits be required.

10. Adding or Editing GPS data

GPS data can be entered into the files using the edit GPS button shown in Figure 10
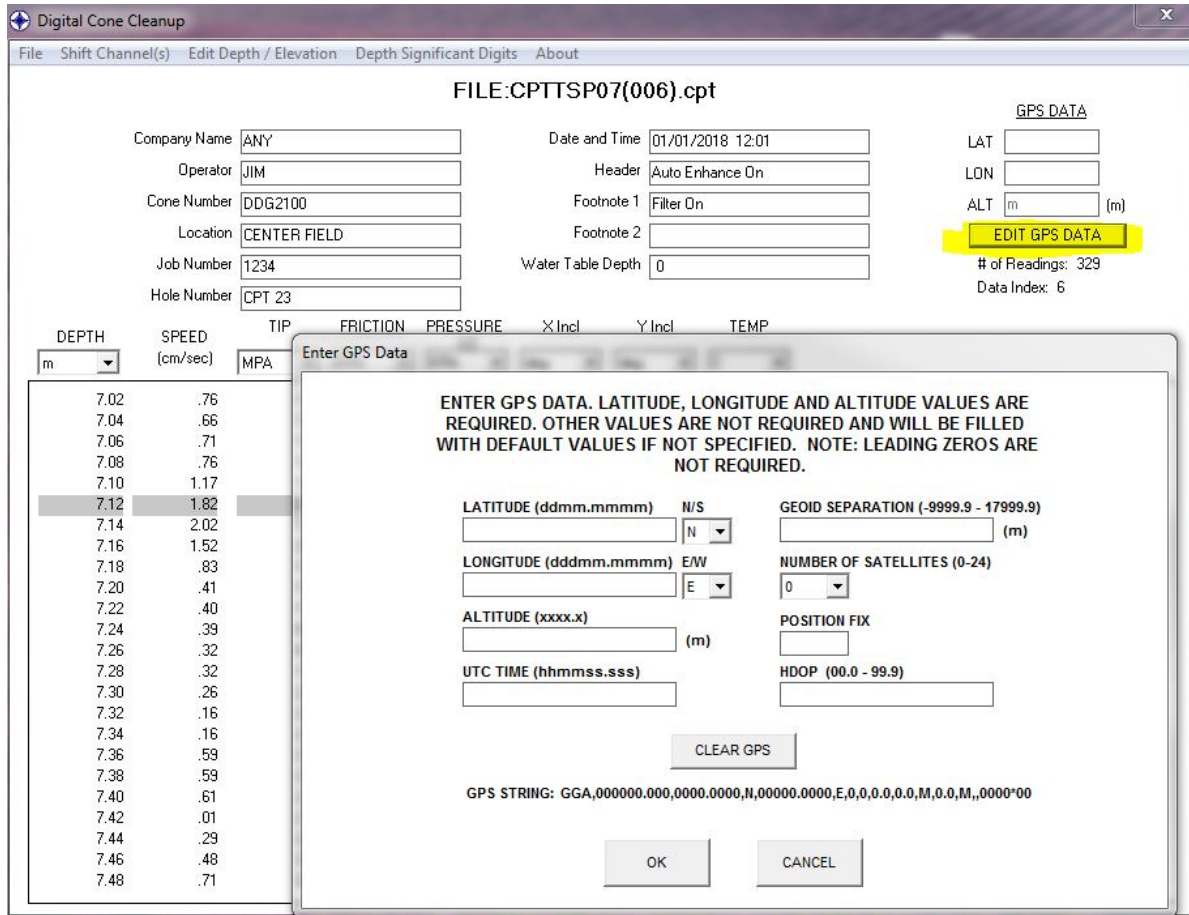
Figure 10

Simply enter the data that you know into the latitude, longitude, and altitude boxes and the system will format it properly for entry in the headers in CONEPLOT. (see figures 11 & 12)

Once all your editing is done simply save the file normally (as always we strongly recommend saving the raw data file unchanged - any edits should be saved with the file name altered)

Once saved the properly formatted GPS data is part of the header information and be easily displayed in the headers of the various ConePlot outputs.

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Figure 11

ENTER GPS DATA. LATITUDE, LONGITUDE AND ALTITUDE VALUES ARE
REQUIRED. OTHER VALUES ARE NOT REQUIRED AND WILL BE FILLED
WITH DEFAULT VALUES IF NOT SPECIFIED. NOTE: LEADING ZEROS ARE
NOT REQUIRED.

LATITUDE (ddmm.mmmm)   N/S
4234   N

GEOID SEPARATION (-9999.9 - 17999.9)
                        (m)

LONGITUDE (dddmm.mmmm) E/W
6321.6   E

NUMBER OF SATELLITES (0-24)
0

ALTITUDE (xxxx.x)
195   (m)

POSITION FIX

UTC TIME (hhmmss.sss)

HDOP (00.0 - 99.9)

CLEAR GPS

GPS STRING: GGA,000000.000,4234.0000,N,06321.6000,E,0,0,0.0,195.0,M,0.0,M,,0000*00

OK   CANCEL

Digital Cone Cleanup

File   Shift Channel(s)   Edit Depth / Elevation   Depth Significant Digits   About

FILE:CPTTSP06(001).cpt

| | | GPS DATA |
Company Name ANY   Date and Time 01/01/2018   12:01 AM   LAT 4234.0000N
Operator JIM   Header Auto Enhance On   LON 06321.6000E
Cone Number DDG2100   Footnote 1 Filter On   ALT 195.0m   (m)
Location CENTER FIELD   Footnote 2   EDIT GPS DATA
Job Number 1234   Water Table Depth 0   # of Readings: 659
Hole Number CPT23   Data Index: 6

DEPTH	SPEED
m	(cm/sec)	MP
3.02	.14
3.04	.81
3.06	.45
3.08	.43
3.10	.60
3.12	.52
3.14	.39
3.16	.39
3.18	.98
3.20	.70
3.22	.48
3.24	.74
3.26	.74
3.28	.64
3.30	.64
3.32	.24
3.34	.22
3.36	.35
3.38	.17
3.40	.30
3.42	.27
3.44	1.58
3.46	1.40
3.48	.38

Enter GPS Data

ENTER GPS DATA. LATITUDE, LONGITUDE AND ALTITUDE VALUES ARE
REQUIRED. OTHER VALUES ARE NOT REQUIRED AND WILL BE FILLED
WITH DEFAULT VALUES IF NOT SPECIFIED. NOTE: LEADING ZEROS ARE
NOT REQUIRED.

LATITUDE (ddmm.mmmm)   N/S
4234.0000   N

GEOID SEPARATION (-9999.9 - 17999.9)
0.0   (m)

LONGITUDE (dddmm.mmmm) E/W
06321.6000   E

NUMBER OF SATELLITES (0-24)
0

ALTITUDE (xxxx.x)
195.0   (m)

POSITION FIX
0

UTC TIME (hhmmss.sss)
000000.000

HDOP (00.0 - 99.9)
0.0

CLEAR GPS

GPS STRING: GGA,000000.000,4234.0000,N,06321.6000,E,0,0,0.0,195.0,M,0.0,M,,0000*00

OK   CANCEL

Figure 12