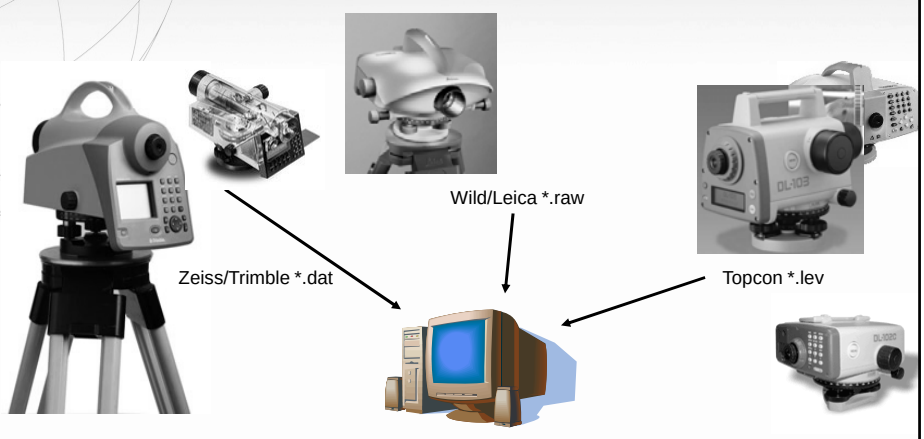
National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

Translev

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

What is Translev ?

- Translev is a computer program that assists in your editing, formatting and checking of raw digital leveling data.



What Does Translev Do?

Translev Creates

- A master (***.HGZ**) file
- a **booking** (***.BOK**) and an editable **leveling** (***.LVL**) files
- an **abstract** (***.ABS**) file
- a **VERTOBS** datasets for submission to the **N**ational **G**eodetic **S**urvey

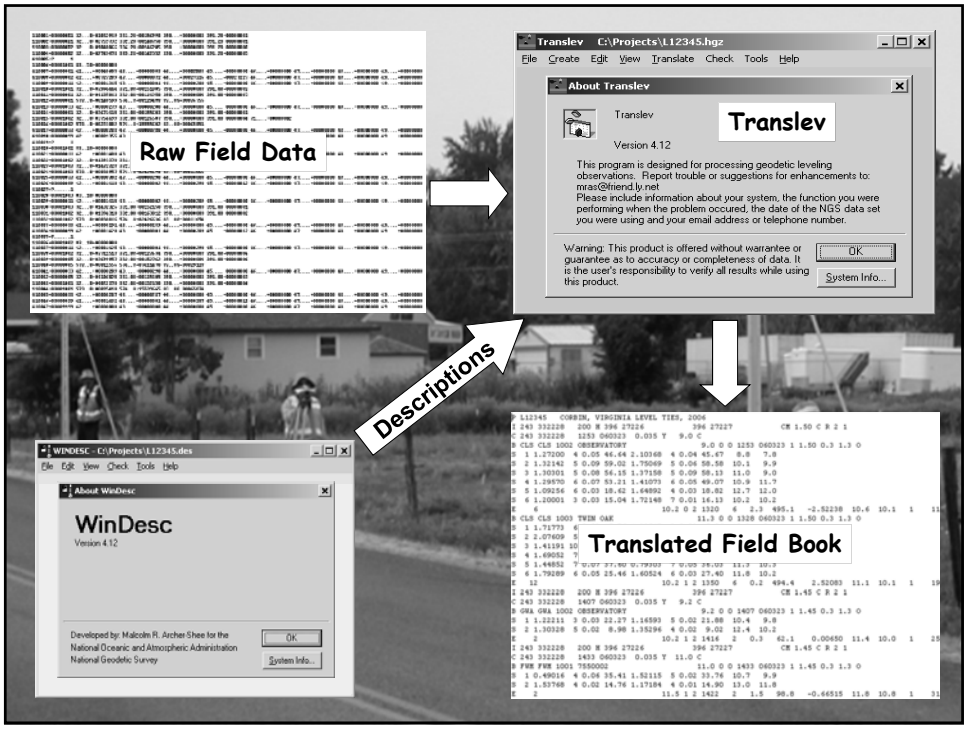
Translev Includes

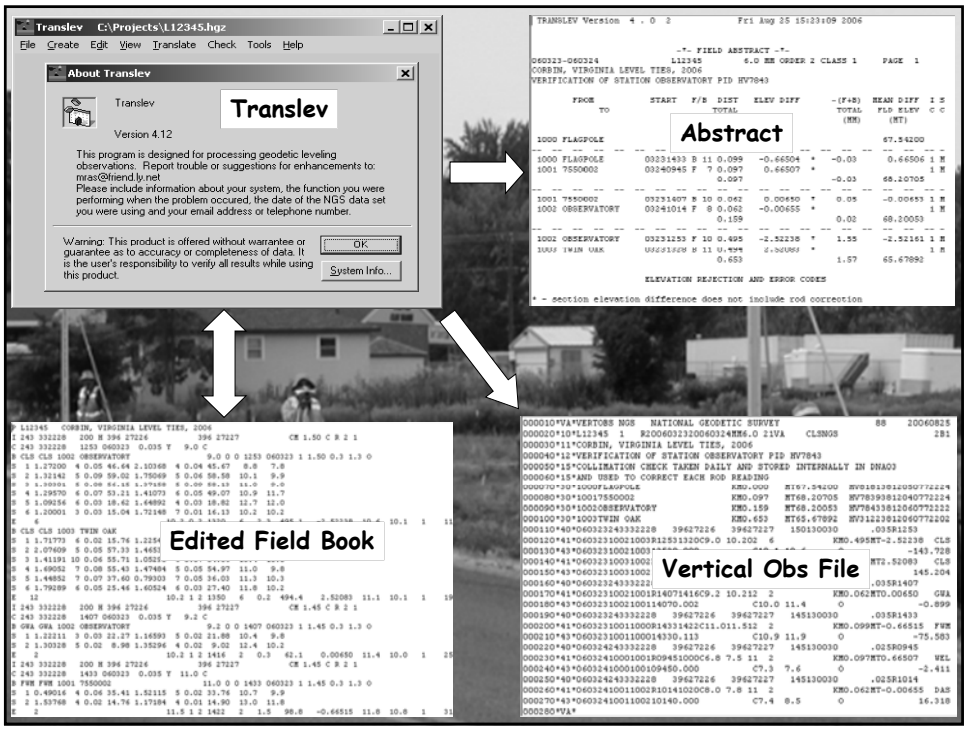
- many built-in functions such as predicting temperature differences, refraction corrections, rod corrections and level run plotting.
- editing routines for "***.LVL"** and "**VERTOBS"** files.

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The Details

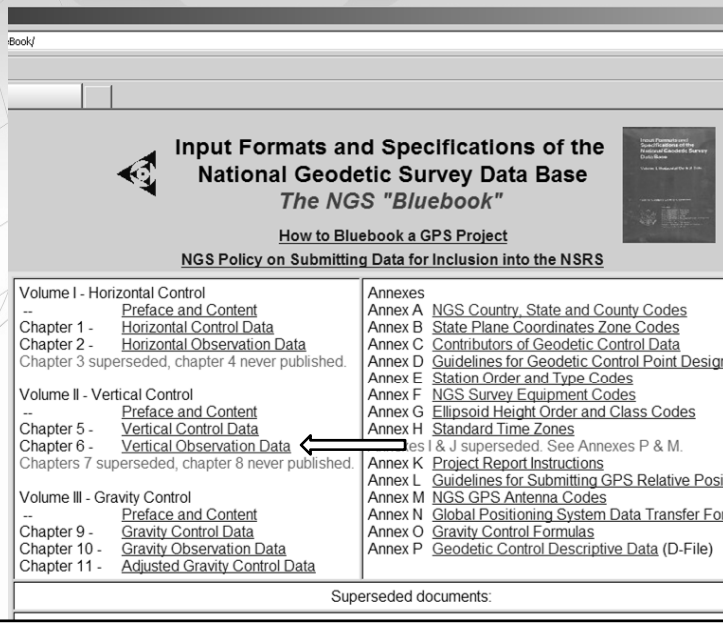



Raw Field Data
Translev
Translev C:\Projects\L12345.hgz
File Create Edit View Translate Check Tools Help
About Translev
Translev
Version 4.12
This program is designed for processing geodetic leveling observations. Report trouble or suggestions for enhancements to: mras@friend.ly.net
Please include information about your system, the function you were performing when the problem occured, the date of the NGS data set you were using and your email address or telephone number.
Warning: This product is offered without warrantee or guarantee as to accuracy or completeness of data. It is the user's responsibility to verify all results while using this product.
OK
System Info...
Descriptions
WINDESC - C:\Projects\L12345.des
File Edit View Check Tools Help
About WinDesc
WinDesc
Version 4.12
Developed by: Malcolm R. Archer-Shee for the National Oceanic and Atmospheric Administration National Geodetic Survey
OK
System Info...
Translated Field Book


Translev C:\Projects\L12345.hgz
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About Translev
Translev
Version 4.12
Translev
This program is designed for processing geodetic leveling observations. Report trouble or suggestions for enhancements to: mras@friend.ly.net
Please include information about your system, the function you were performing when the problem occured, the date of the NGS data set you were using and your email address or telephone number.
Warning: This product is offered without warrantee or guarantee as to accuracy or completeness of data. It is the user's responsibility to verify all results while using this product.
OK
System Info...
TRANSLEV Version 4 . 0 2 Fri Aug 25 15:23:09 2006
-*- FIELD ABSTRACT -*-
Abstract
Edited Field Book
Vertical Obs File

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

http://www.ngs.noaa.gov/FGCS/BlueBook/



National Geodetic Survey

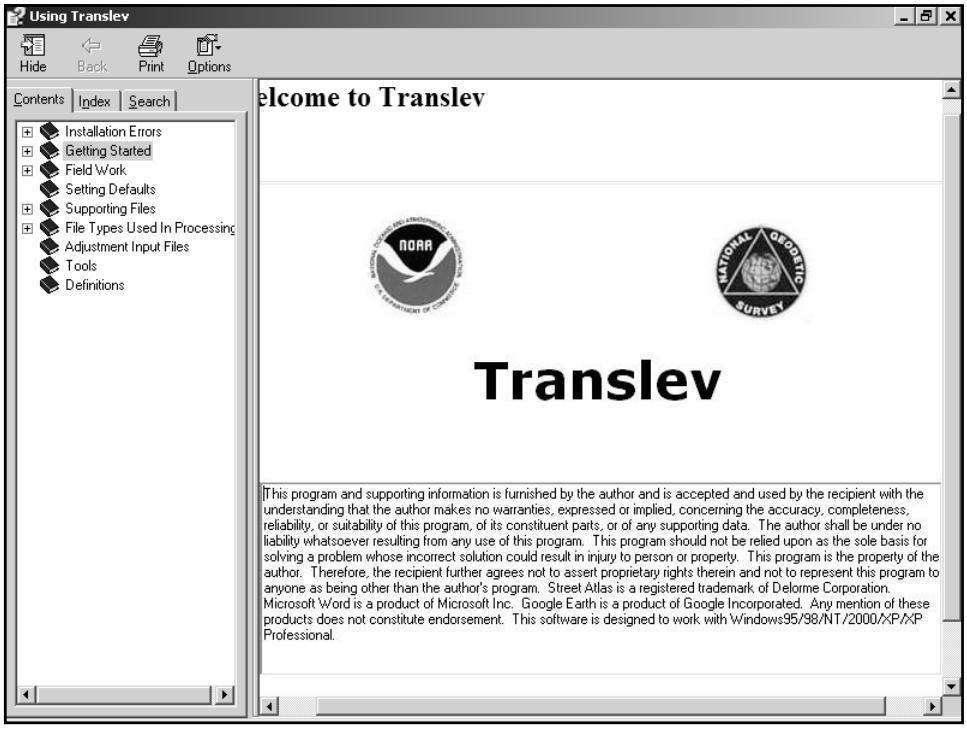
Chapter 6

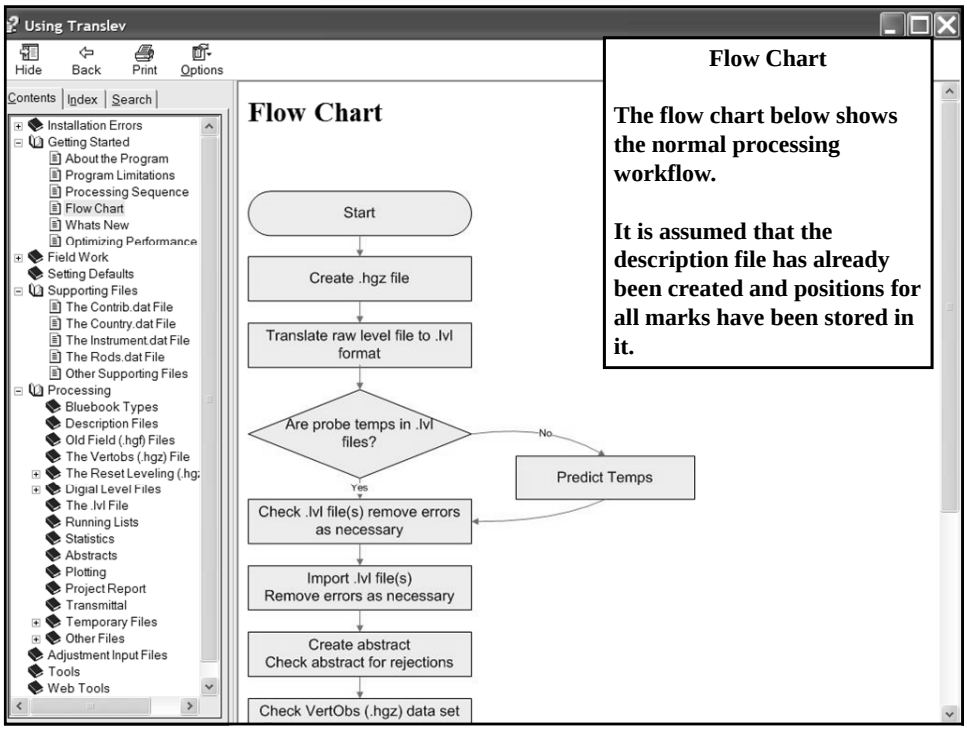
VERTICAL OBSERVATION (VERT OBS) DATA

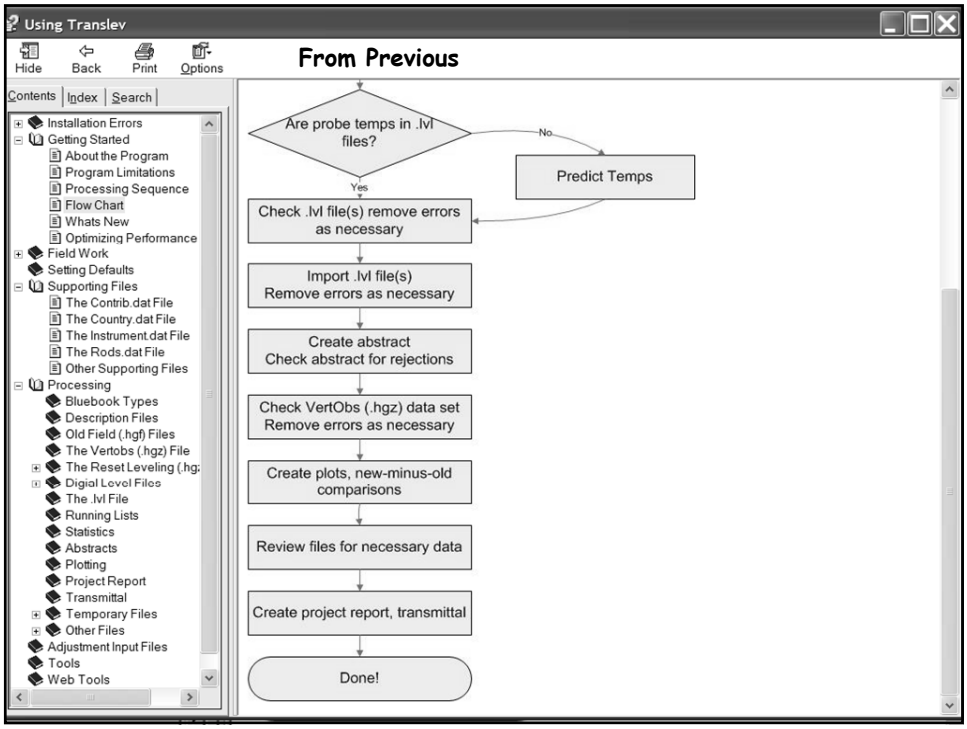
INTRODUCTION

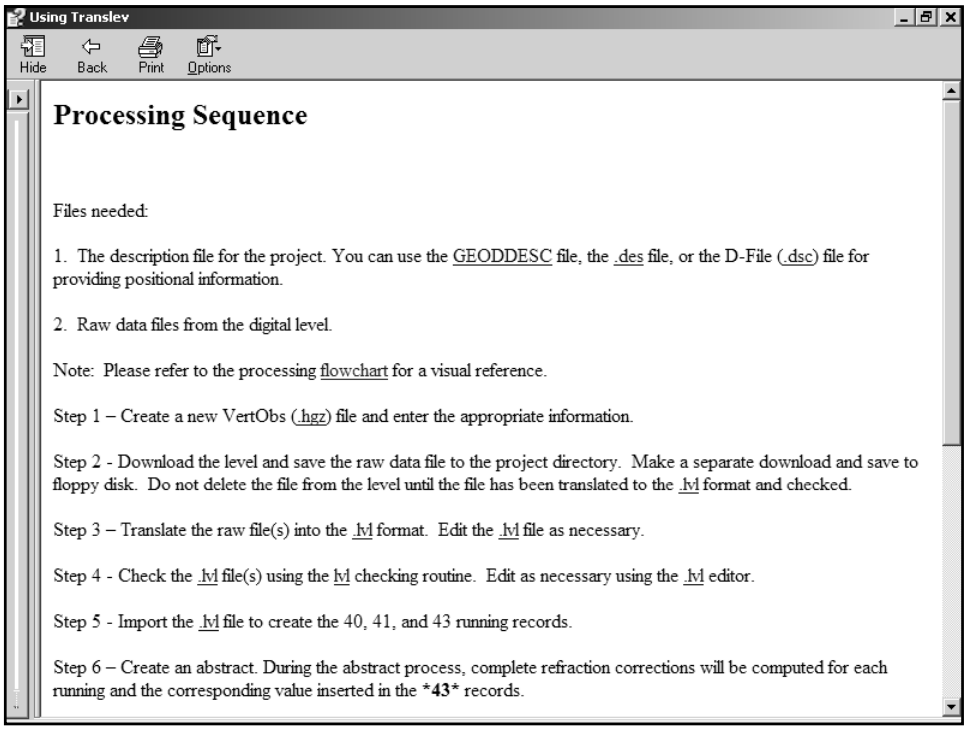
The purpose of this chapter is to provide detailed specifications and instructions for the coding and keying of the observation data set of a vertical control job. As explained in Chapter 5, a vertical control job consists of two distinct data sets which must be submitted together. The companion data set to the vertical observation (VERT OBS) data set discussed in this chapter is the data set containing original descriptions and/or recovery descriptions for the control points which occur in the vertical control job. This description data set is treated in Annex P.

National Oceanic and Atmospheric Administration


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Supporting Files
File Types Used In Processing
Adjustment Input Files
Tools
Definitions
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This program and supporting information is furnished by the author and is accepted and used by the recipient with the understanding that the author makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this program, of its constituent parts, or of any supporting data. The author shall be under no liability whatsoever resulting from any use of this program. This program should not be relied upon as the sole basis for solving a problem whose incorrect solution could result in injury to person or property. This program is the property of the author. Therefore, the recipient further agrees not to assert proprietary rights therein and not to represent this program to anyone as being other than the author's program. Street Atlas is a registered trademark of Delorme Corporation. Microsoft Word is a product of Microsoft Inc. Google Earth is a product of Google Incorporated. Any mention of these products does not constitute endorsement. This software is designed to work with Windows95/98/NT/2000/XP/XP Professional.


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Start
Create .hgz file
Translate raw level file to .lvl format
Are probe temps in .lvl files?
No
Yes
Predict Temps
Check .lvl file(s) remove errors as necessary
Import .lvl file(s) Remove errors as necessary
Create abstract Check abstract for rejections
Check VertObs (.hgz) data set
Flow Chart
The flow chart below shows the normal processing workflow.
It is assumed that the description file has already been created and positions for all marks have been stored in it.


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The Country.dat File
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The Vertobs (.hgz) File
The Reset Leveling (.hg
Digial Level Files
The .lvl File
Running Lists
Statistics
Abstracts
Plotting
Project Report
Transmittal
Temporary Files
Other Files
Adjustment Input Files
Tools
Web Tools
Are probe temps in .lvl files?
No
Yes
Predict Temps
Check .lvl file(s) remove errors as necessary
Import .lvl file(s) Remove errors as necessary
Create abstract Check abstract for rejections
Check VertObs (.hgz) data set Remove errors as necessary
Create plots, new-minus-old comparisons
Review files for necessary data
Create project report, transmittal
Done!


Using Translev
Hide
Back
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Options
Processing Sequence
Files needed:
1. The description file for the project. You can use the GEODDESC file, the .des file, or the D-File (.dsc) file for providing positional information.
2. Raw data files from the digital level.
Note: Please refer to the processing flowchart for a visual reference.
Step 1 – Create a new VertObs (.hgz) file and enter the appropriate information.
Step 2 - Download the level and save the raw data file to the project directory. Make a separate download and save to floppy disk. Do not delete the file from the level until the file has been translated to the .lvl format and checked.
Step 3 – Translate the raw file(s) into the .lvl format. Edit the .lvl file as necessary.
Step 4 - Check the .lvl file(s) using the lvl checking routine. Edit as necessary using the .lvl editor.
Step 5 - Import the .lvl file to create the 40, 41, and 43 running records.
Step 6 – Create an abstract. During the abstract process, complete refraction corrections will be computed for each running and the corresponding value inserted in the *43* records.

Using Translev

Hide Back Print Options

Step 4 - Check the .lvl file(s) using the lvl checking routine. Edit as necessary using the .lvl editor.

Step 5 - Import the .lvl file to create the 40, 41, and 43 running records.

Step 6 – Create an abstract. During the abstract process, complete refraction corrections will be computed for each running and the corresponding value inserted in the ***43*** records.

Step 7 – Check for errors from the abstract process. Review each running carefully and remove runnings that are out of specification. These will be marked with an "R". If both runnings for the section are shown as being rejected, perform additional runnings until at least one running in each direction remains for each section adjacent to a new bench mark.

Step 8 – Create necessary plots and review positions and connections.

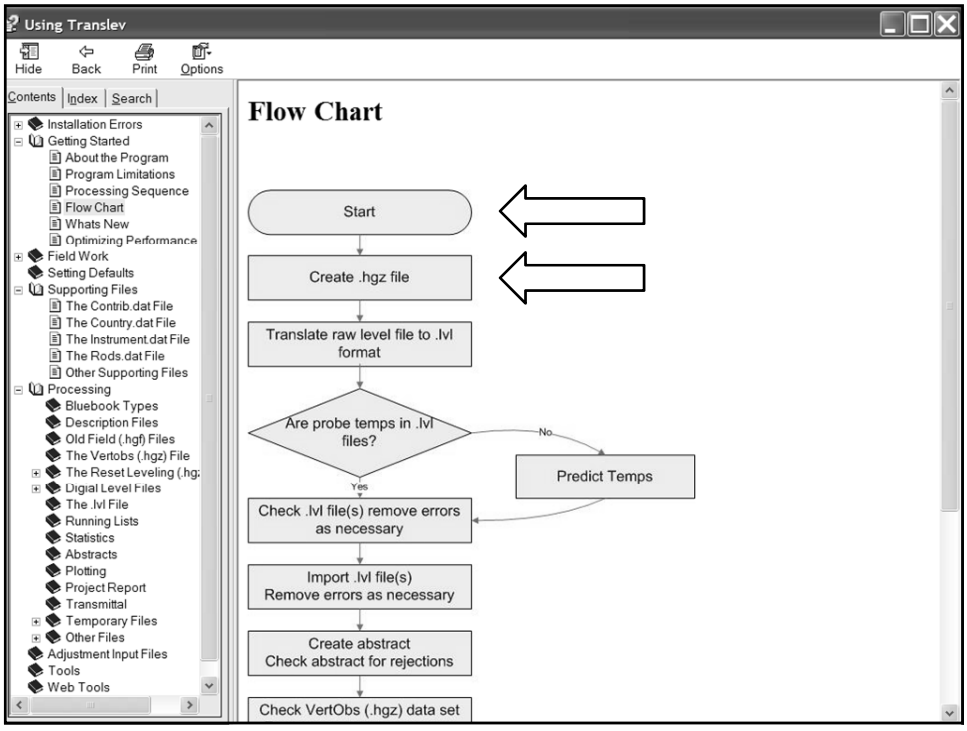
Step 9 - Check the VERTOBS (.hgz) file using the vertobs checking routine.

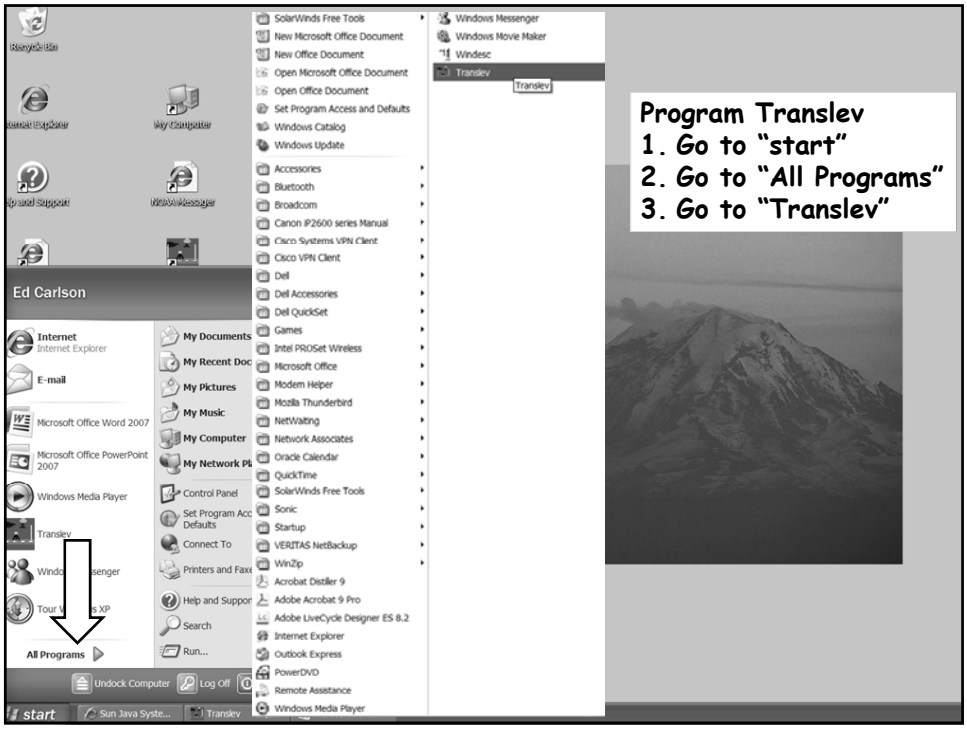
Repeat steps 2 thru 9 for each level line of the project.

Step 10 – Create new-minus-old comparisons.

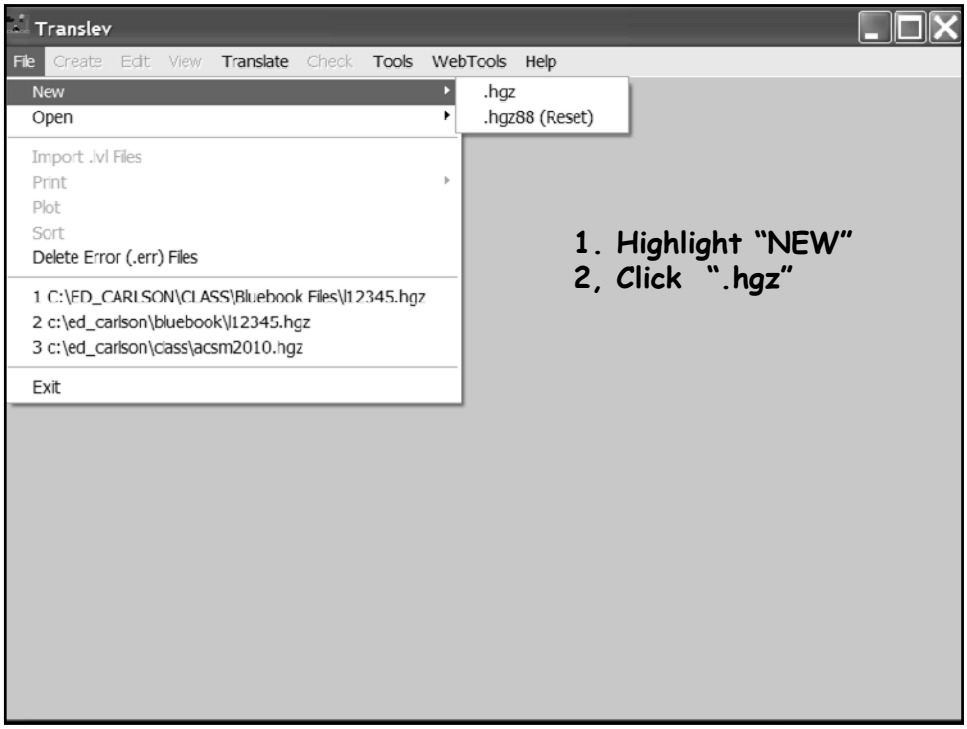
Step 11 – Create the project report.

Step 12 – Create the Transmittal.



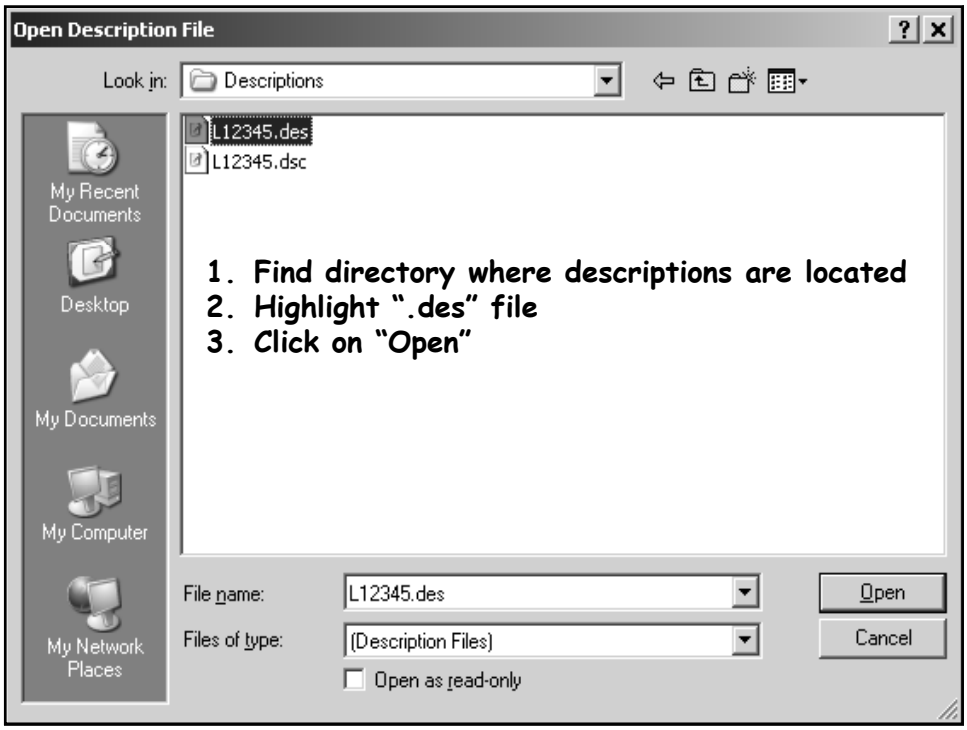

Program Translev
1. Go to "start"
2. Go to "All Programs"
3. Go to "Translev"
Ed Carlson
All Programs
start

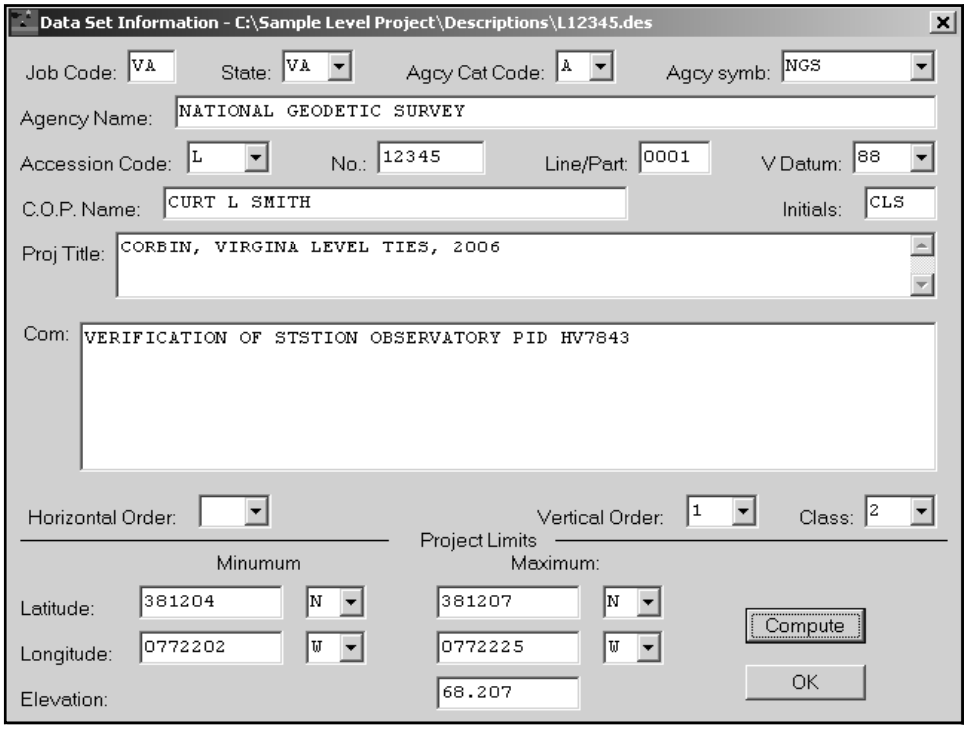

Translev
File Create Edit View Translate Check Tools Help
Click on "File"

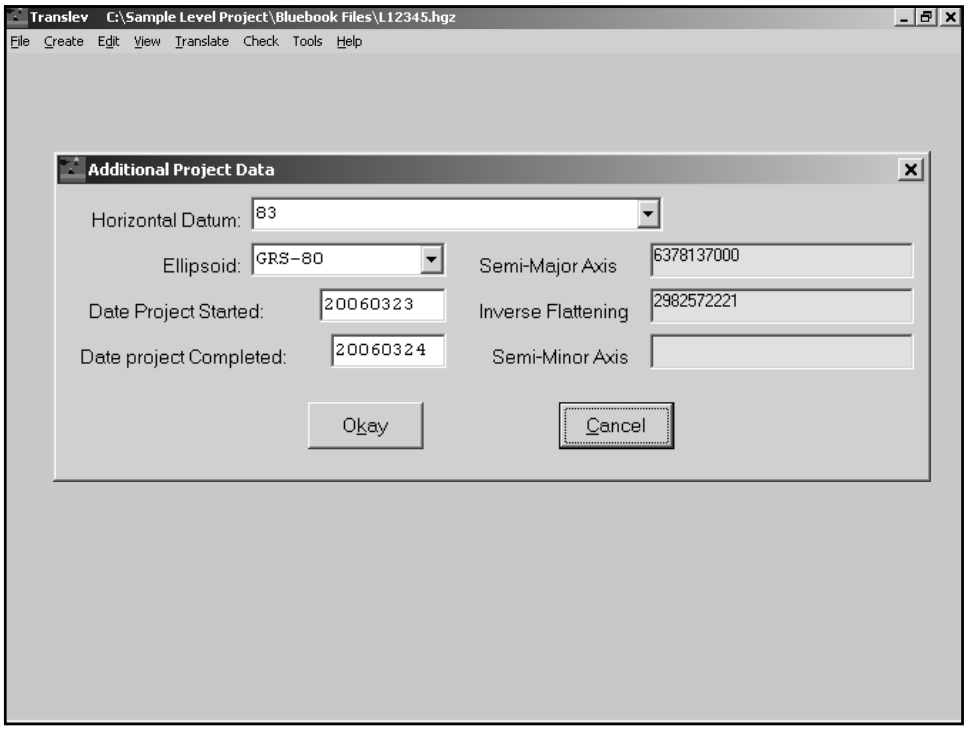

Translev
File Create Edit View Translate Check Tools WebTools Help
New
Open
Import .lvl Files
Print
Plot
Sort
Delete Error (.err) Files
1 C:\ED_CARLSON\CLASS\Bluebook Files\l12345.hgz
2 c:\ed_carlson\bluebook\l12345.hgz
3 c:\ed_carlson\class\acsm2010.hgz
Exit
.hgz
.hgz88 (Reset)
1. Highlight "NEW"
2, Click ".hgz"

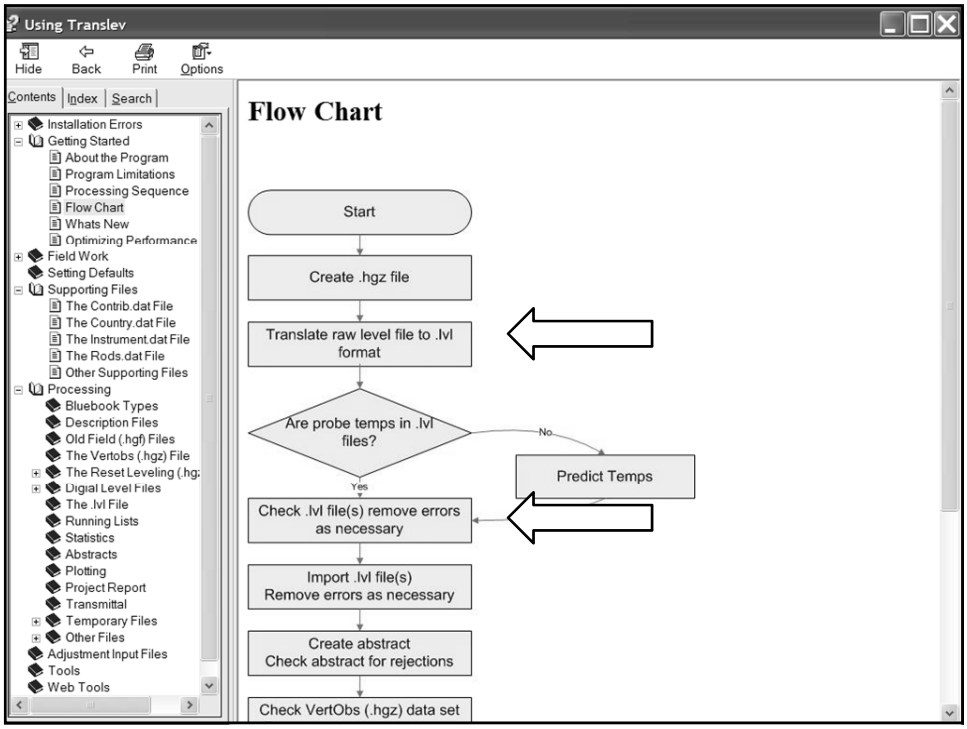

Create Bluebook Observation File (VERTOBS)
Save in:
Bluebook Files
My Recent Documents
Desktop
My Documents
My Computer
My Network Places
1. Find working directory
2. Enter file name
3. Click on "Save"
File name:
L12345
Save as type:
(*.hgz)
Save
Cancel


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Translev
Use this discription file:
?
Yes
No

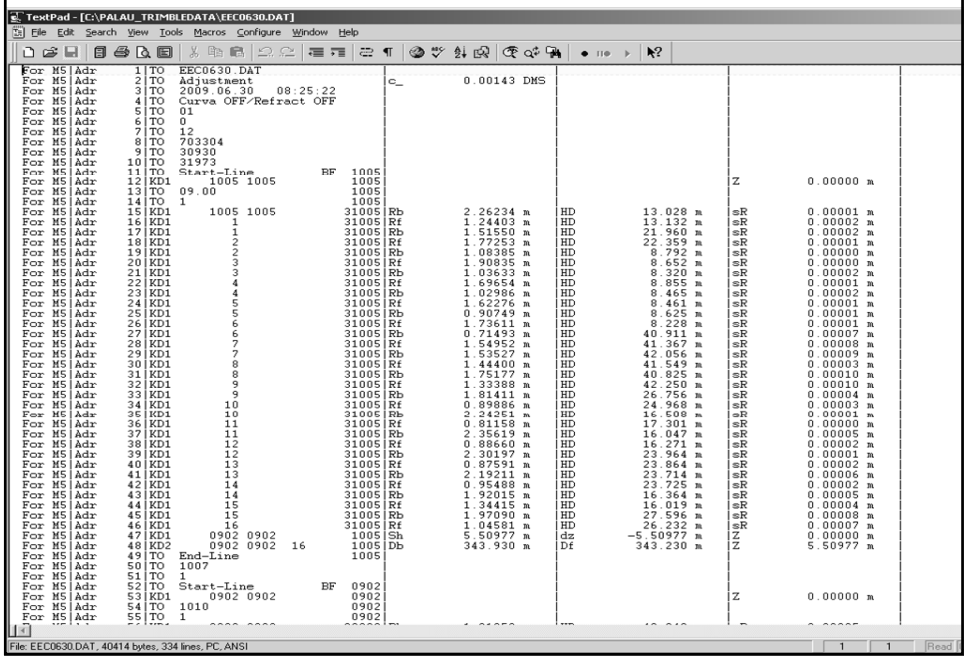

Open Description File
Look in: Descriptions
L12345.des
L12345.dsc
My Recent Documents
Desktop
My Documents
My Computer
My Network Places
1. Find directory where descriptions are located
2. Highlight ".des" file
3. Click on "Open"
File name: L12345.des
Files of type: (Description Files)
Open as read-only
Open
Cancel


Data Set Information - C:\Sample Level Project\Descriptions\L12345.des
Job Code: VA
State: VA
Agcy Cat Code: A
Agcy symb: NGS
Agency Name: NATIONAL GEODETIC SURVEY
Accession Code: L
No.: 12345
Line/Part: 0001
V Datum: 88
C.O.P. Name: CURT L SMITH
Initials: CLS
Proj Title: CORBIN, VIRGINA LEVEL TIES, 2006
Com: VERIFICATION OF STSTION OBSERVATORY PID HV7843
Horizontal Order:
Vertical Order: 1
Class: 2
Project Limits
Minumum
Maximum:
Latitude: 381204 N 381207 N
Longitude: 0772202 W 0772225 W
Elevation: 68.207
Compute
OK

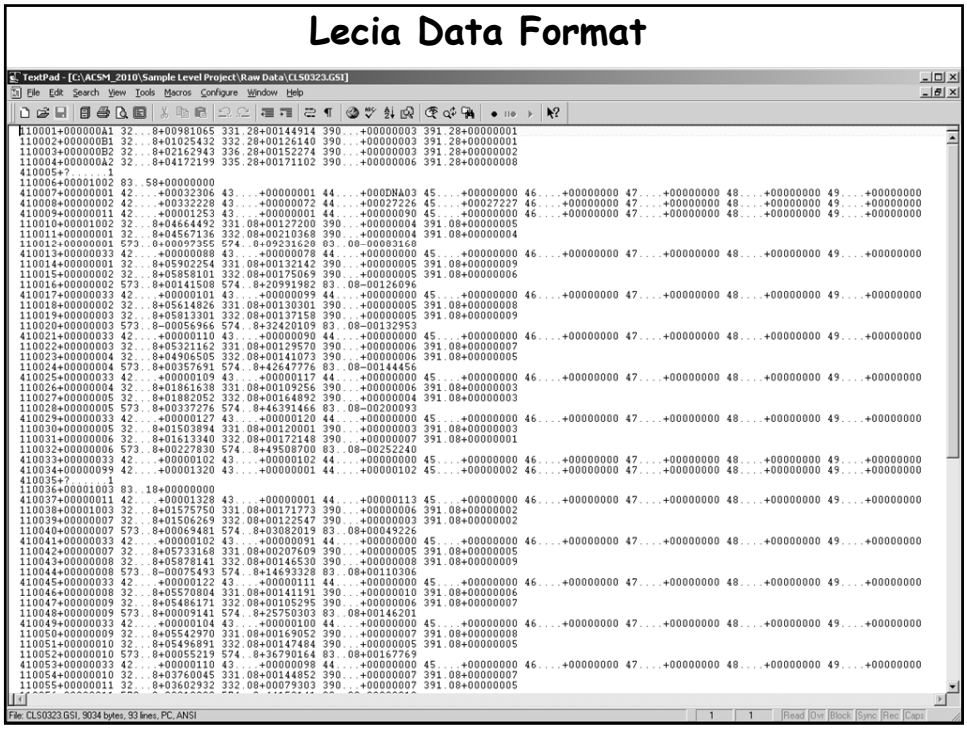

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Additional Project Data
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Ellipsoid: GRS-80
Semi-Major Axis 6378137000
Date Project Started: 20060323
Inverse Flattening 2982572221
Date project Completed: 20060324
Semi-Minor Axis
Okay
Cancel

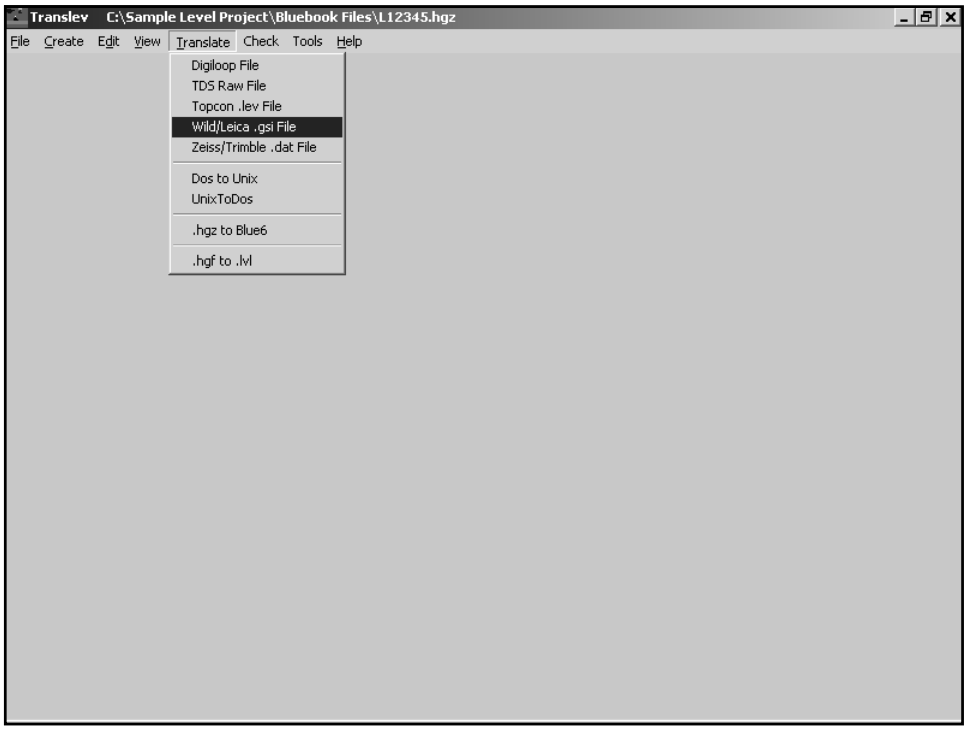


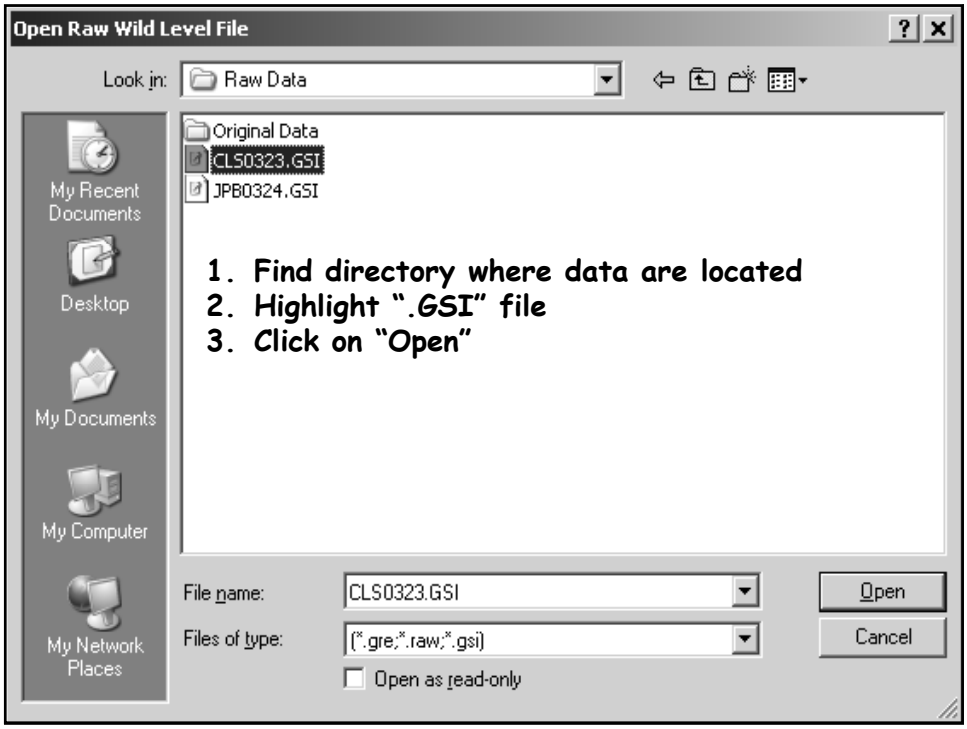
Trimble Data Format

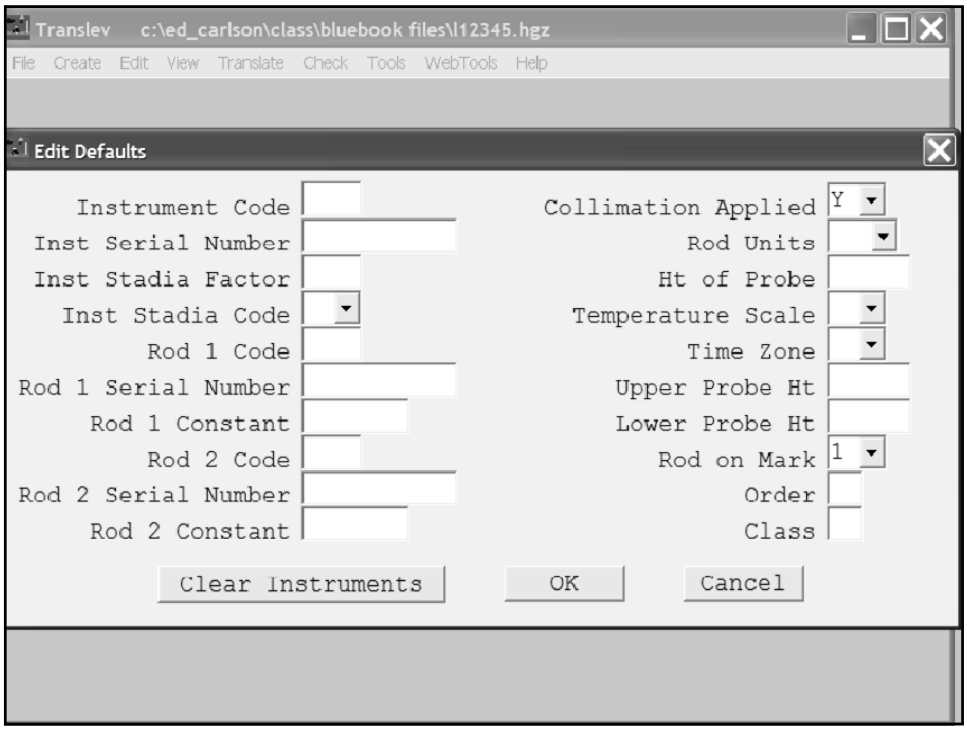


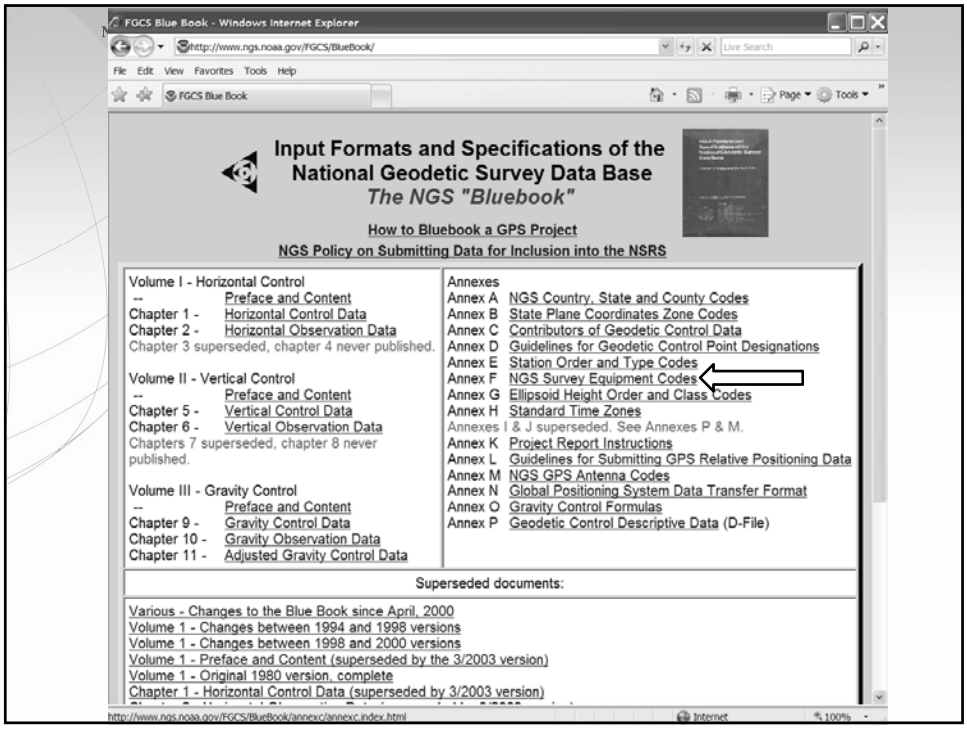
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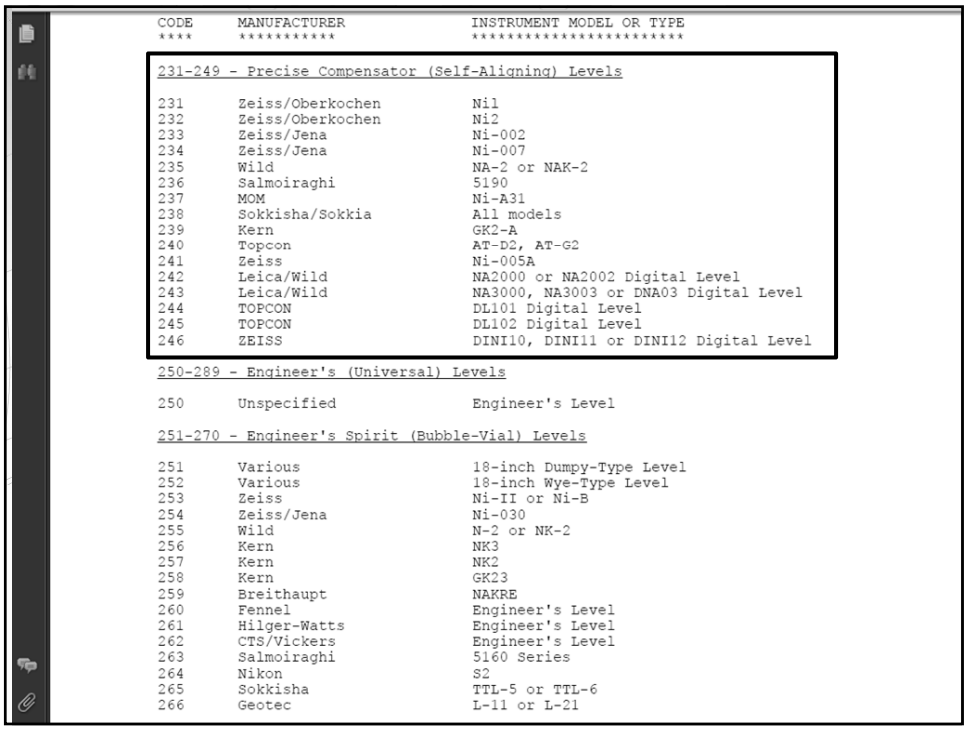




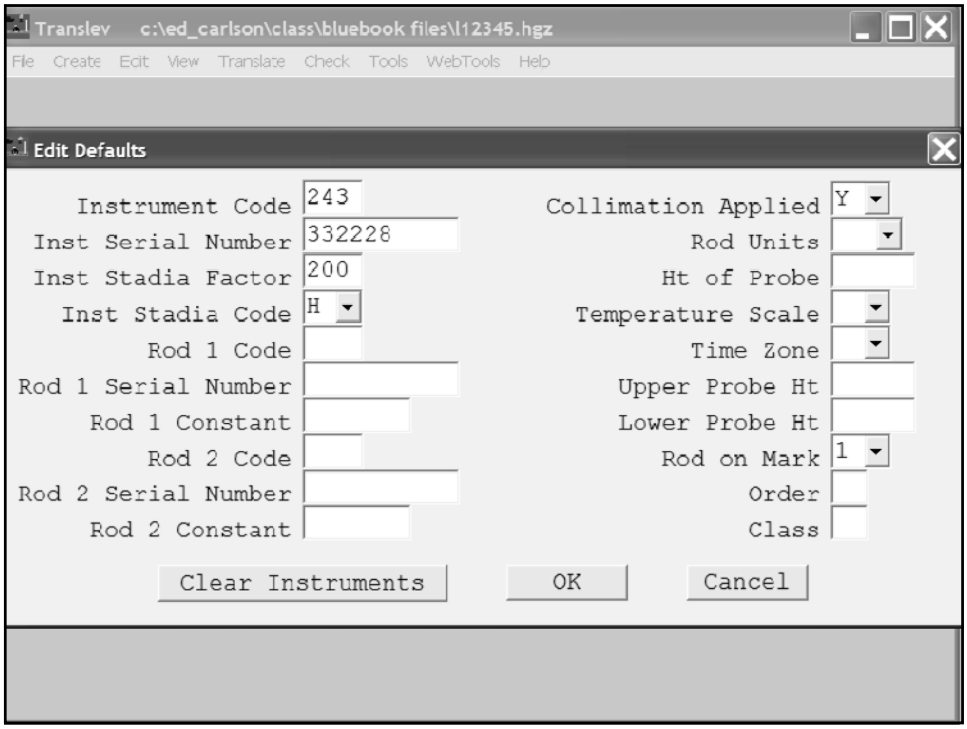

Open Raw Wild Level File
Look in:
Raw Data
Original Data
CLS0323.GSI
JPB0324.GSI
My Recent Documents
Desktop
My Documents
My Computer
My Network Places
1. Find directory where data are located
2. Highlight ".GSI" file
3. Click on "Open"
File name:
CLS0323.GSI
Files of type:
(*.gre;*.raw;*.gsi)
Open as read-only
Open
Cancel

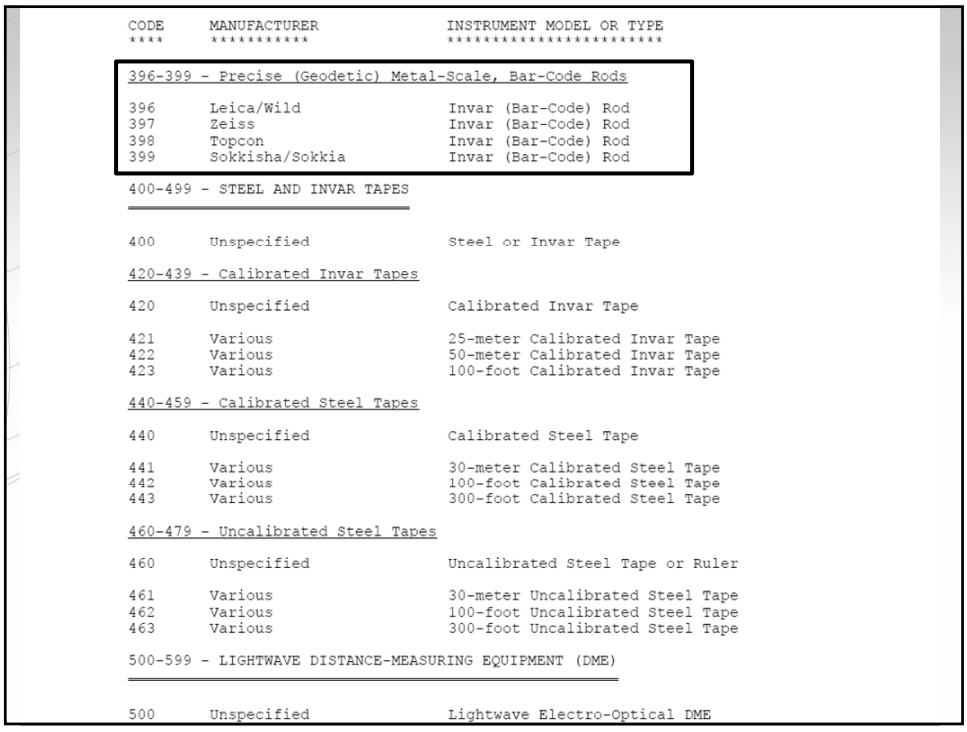

Translev c:\ed_carlson\class\bluebook files\12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Edit Defaults
Instrument Code
Inst Serial Number
Inst Stadia Factor
Inst Stadia Code
Rod 1 Code
Rod 1 Serial Number
Rod 1 Constant
Rod 2 Code
Rod 2 Serial Number
Rod 2 Constant
Collimation Applied
Rod Units
Ht of Probe
Temperature Scale
Time Zone
Upper Probe Ht
Lower Probe Ht
Rod on Mark
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Class
Clear Instruments
OK
Cancel



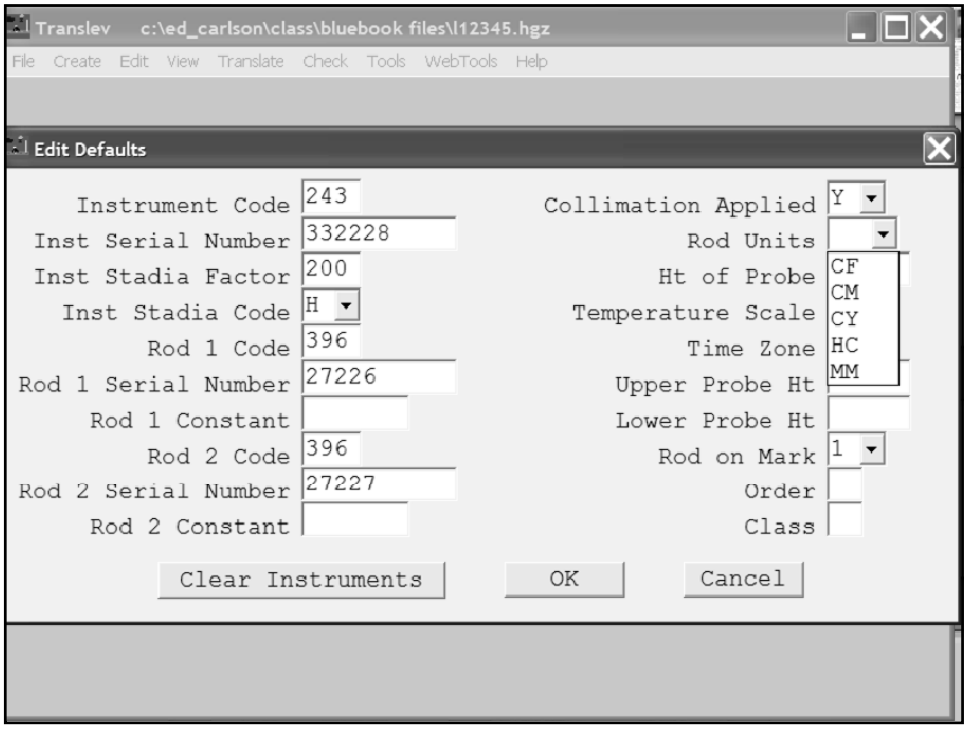


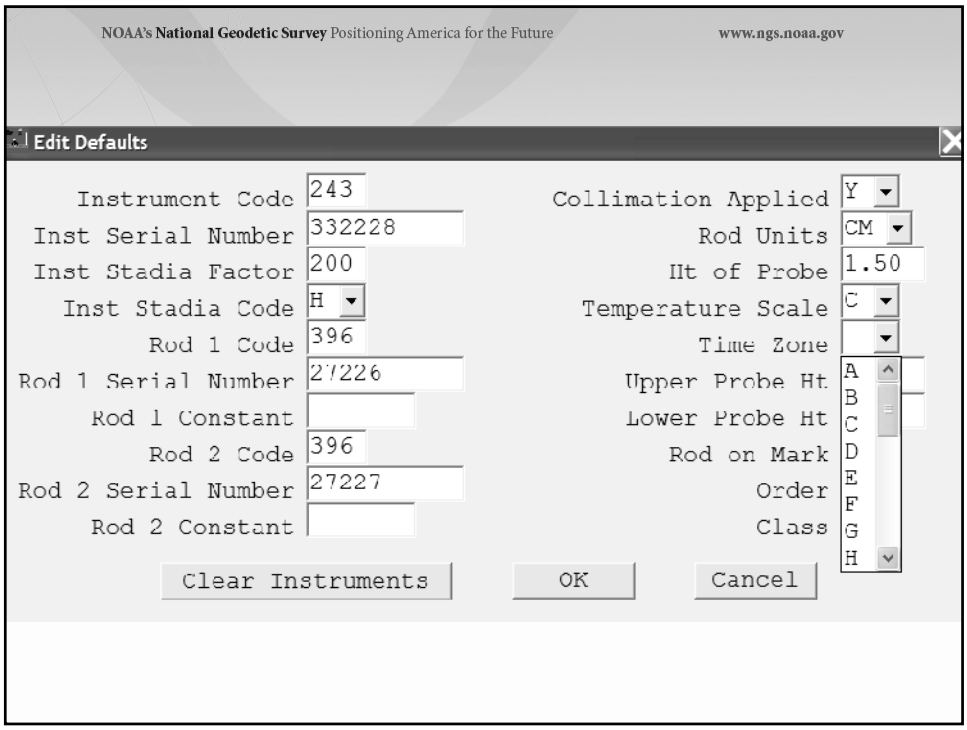
CODE	MANUFACTURER	INSTRUMENT MODEL OR TYPE
****	**********	**********
231-249 - Precise Compensator (Self-Aligning) Levels		
231	Zeiss/Oberkochen	Nil
232	Zeiss/Oberkochen	Ni2
233	Zeiss/Jena	Ni-002
234	Zeiss/Jena	Ni-007
235	Wild	NA-2 or NAK-2
236	Salmoiraghi	5190
237	MOM	Ni-A31
238	Sokkisha/Sokkia	All models
239	Kern	GK2-A
240	Topcon	AT-D2, AT-G2
241	Zeiss	Ni-005A
242	Leica/Wild	NA2000 or NA2002 Digital Level
243	Leica/Wild	NA3000, NA3003 or DNA03 Digital Level
244	TOPCON	DL101 Digital Level
245	TOPCON	DL102 Digital Level
246	ZEISS	DINI10, DINI11 or DINI12 Digital Level
250-289 - Engineer's (Universal) Levels		
250	Unspecified	Engineer's Level
251-270 - Engineer's Spirit (Bubble-Vial) Levels		
251	Various	18-inch Dumpy-Type Level
252	Various	18-inch Wye-Type Level
253	Zeiss	Ni-II or Ni-B
254	Zeiss/Jena	Ni-030
255	Wild	N-2 or NK-2
256	Kern	NK3
257	Kern	NK2
258	Kern	GK23
259	Breithaupt	NAKRE
260	Fennel	Engineer's Level
261	Hilger-Watts	Engineer's Level
262	CTS/Vickers	Engineer's Level
263	Salmoiraghi	5160 Series
264	Nikon	S2
265	Sokkisha	TTL-5 or TTL-6
266	Geotec	L-11 or L-21

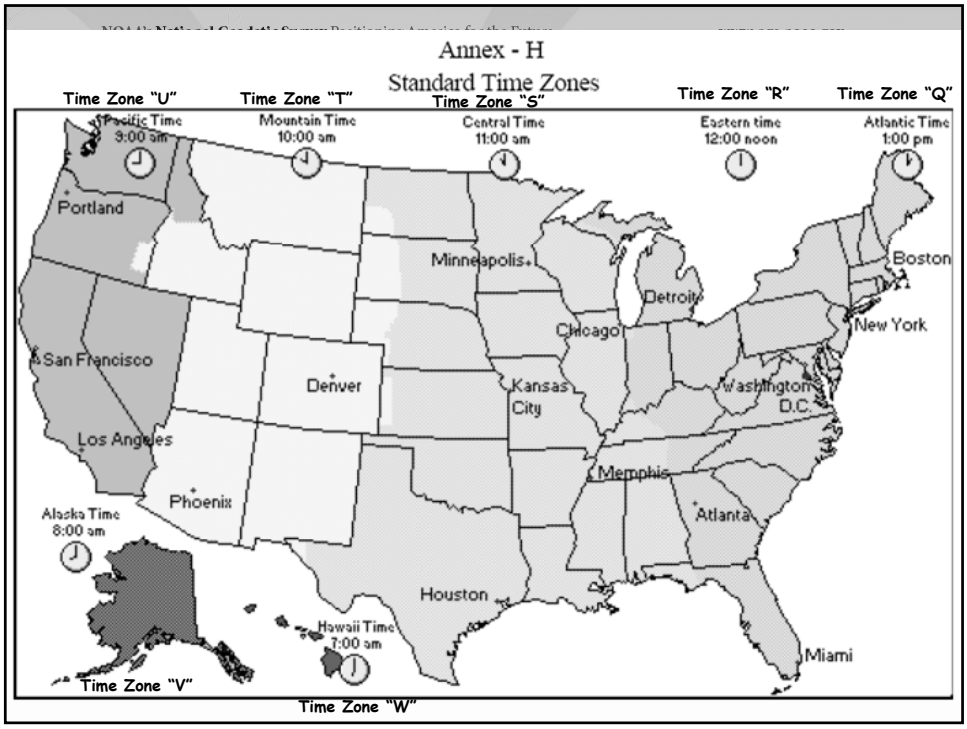




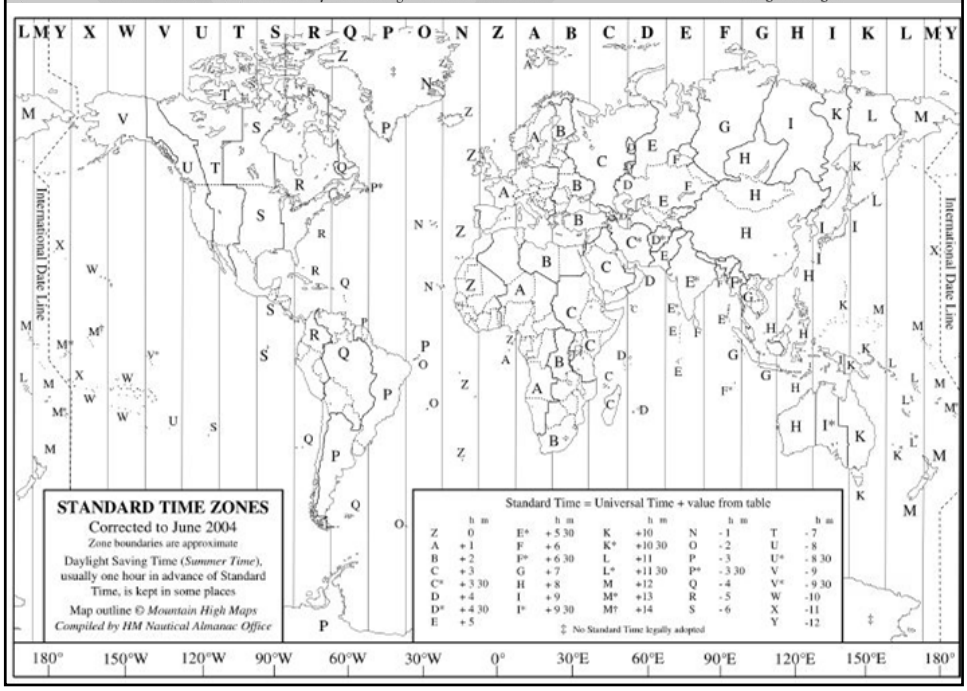
CODE	MANUFACTURER	INSTRUMENT MODEL OR TYPE
****	**********	**********
396-399 - Precise (Geodetic) Metal-Scale, Bar-Code Rods		
396	Leica/Wild	Invar (Bar-Code) Rod
397	Zeiss	Invar (Bar-Code) Rod
398	Topcon	Invar (Bar-Code) Rod
399	Sokkisha/Sokkia	Invar (Bar-Code) Rod
400-499 - STEEL AND INVAR TAPES		
400	Unspecified	Steel or Invar Tape
420-439 - Calibrated Invar Tapes		
420	Unspecified	Calibrated Invar Tape
421	Various	25-meter Calibrated Invar Tape
422	Various	50-meter Calibrated Invar Tape
423	Various	100-foot Calibrated Invar Tape
440-459 - Calibrated Steel Tapes		
440	Unspecified	Calibrated Steel Tape
441	Various	30-meter Calibrated Steel Tape
442	Various	100-foot Calibrated Steel Tape
443	Various	300-foot Calibrated Steel Tape
460-479 - Uncalibrated Steel Tapes		
460	Unspecified	Uncalibrated Steel Tape or Ruler
461	Various	30-meter Uncalibrated Steel Tape
462	Various	100-foot Uncalibrated Steel Tape
463	Various	300-foot Uncalibrated Steel Tape
500-599 - LIGHTWAVE DISTANCE-MEASURING EQUIPMENT (DME)		
500	Unspecified	Lightwave Electro-Optical DME


Translev c:\ed_carlson\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Edit Defaults
Instrument Code 243
Inst Serial Number 332228
Inst Stadia Factor 200
Inst Stadia Code H
Rod 1 Code 396
Rod 1 Serial Number 27226
Rod 1 Constant
Rod 2 Code 396
Rod 2 Serial Number 27227
Rod 2 Constant
Collimation Applied Y
Rod Units
Ht of Probe
Temperature Scale
Time Zone
Upper Probe Ht
Lower Probe Ht
Rod on Mark 1
Order
Class
CF
CM
CY
HC
MM
Clear Instruments
OK
Cancel


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Edit Defaults
Instrument Code 243
Inst Serial Number 332228
Inst Stadia Factor 200
Inst Stadia Code H
Rod 1 Code 396
Rod 1 Serial Number 27226
Rod 1 Constant
Rod 2 Code 396
Rod 2 Serial Number 27227
Rod 2 Constant
Collimation Applied Y
Rod Units CM
Ht of Probe 1.50
Temperature Scale C
Time Zone
Upper Probe Ht
Lower Probe Ht
Rod on Mark
Order
Class
A
B
C
D
E
F
G
H
Clear Instruments
OK
Cancel



World Map of Time Zones - http://aa.usno.navy.mil/faq/docs/world_tzones.html



NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

Edit Defaults

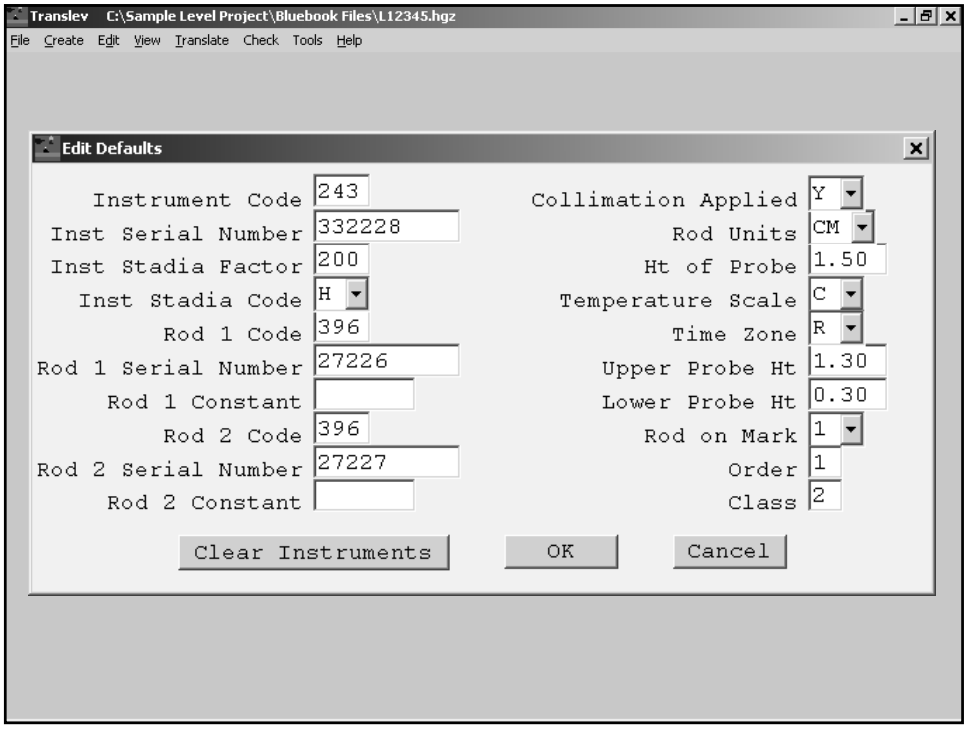
Instrument Code	243	Collimation Applied	Y
Inst Serial Number	332228	Rod Units	CM
Inst Stadia Factor	200	Ht of Probe	1.50
Inst Stadia Code	H	Temperature Scale	C
Rod 1 Code	396	Time Zone	R
Rod 1 Serial Number	27226	Upper Probe Ht	??
Rod 1 Constant		Lower Probe Ht	??
Rod 2 Code	396	Rod on Mark	1
Rod 2 Serial Number	27227	Order	
Rod 2 Constant		Class	

Clear Instruments OK Cancel

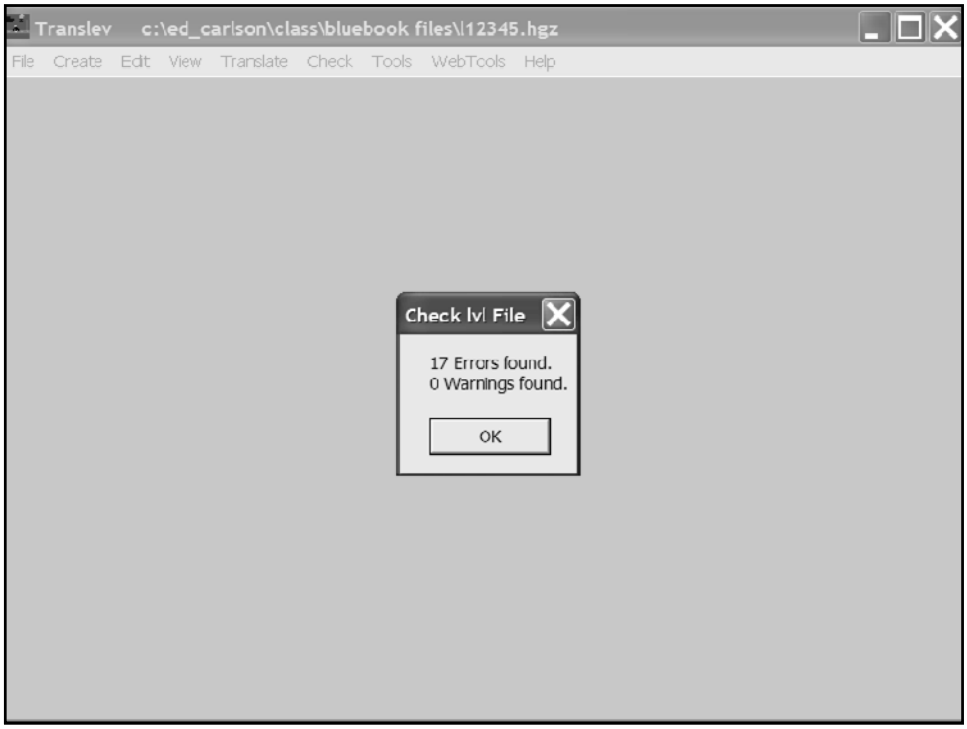
NOAA's

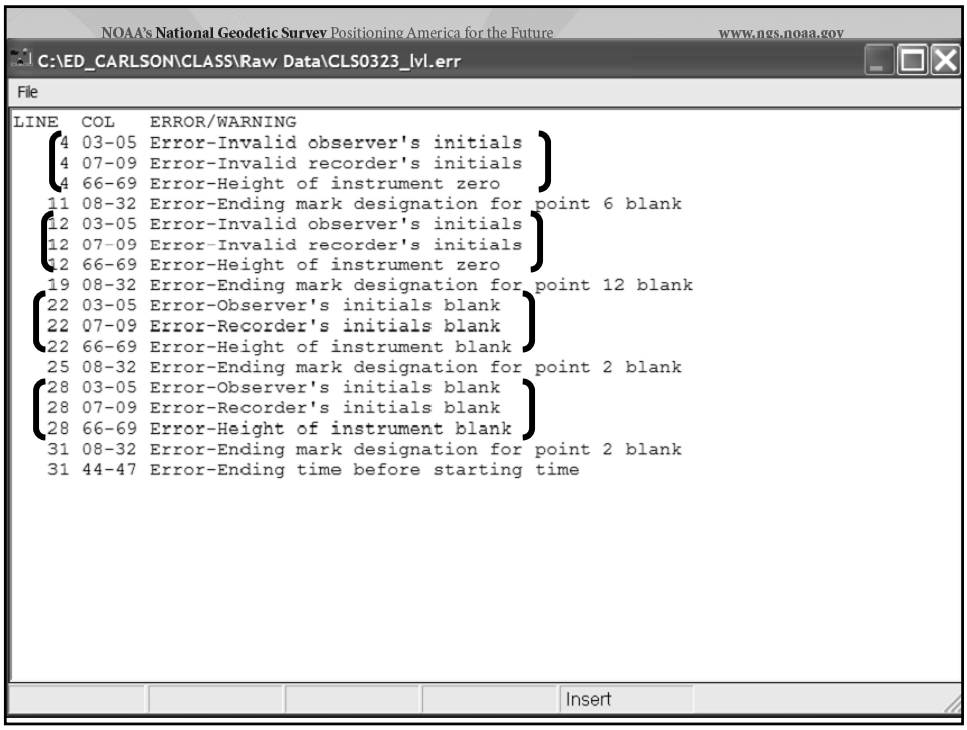


Rigid Leg Tripod With Thermister Equipment


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Edit Defaults
Instrument Code 243
Inst Serial Number 332228
Inst Stadia Factor 200
Inst Stadia Code H
Rod 1 Code 396
Rod 1 Serial Number 27226
Rod 1 Constant
Rod 2 Code 396
Rod 2 Serial Number 27227
Rod 2 Constant
Collimation Applied Y
Rod Units CM
Ht of Probe 1.50
Temperature Scale C
Time Zone R
Upper Probe Ht 1.30
Lower Probe Ht 0.30
Rod on Mark 1
Order 1
Class 2
Clear Instruments
OK
Cancel


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Translev
.lvl file created.
Would you like to check it now?
Yes
No


Transiev c:\ed_carlson\class\bluebook files\12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Check lvl File
17 Errors found.
0 Warnings found.
OK


NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov
C:\ED_CARLSON\CLASS\Raw Data\CLS0323_lvl.err
File
LINE COL ERROR/WARNING
4 03-05 Error-Invalid observer's initials
4 07-09 Error-Invalid recorder's initials
4 66-69 Error-Height of instrument zero
11 08-32 Error-Ending mark designation for point 6 blank
12 03-05 Error-Invalid observer's initials
12 07-09 Error-Invalid recorder's initials
12 66-69 Error-Height of instrument zero
19 08-32 Error-Ending mark designation for point 12 blank
22 03-05 Error-Observer's initials blank
22 07-09 Error-Recorder's initials blank
22 66-69 Error-Height of instrument blank
25 08-32 Error-Ending mark designation for point 2 blank
28 03-05 Error-Observer's initials blank
28 07-09 Error-Recorder's initials blank
28 66-69 Error-Height of instrument blank
31 08-32 Error-Ending mark designation for point 2 blank
31 44-47 Error-Ending time before starting time
Insert

NOAA's **National Geodetic Survey** Positioning America for the Future www.ngs.noaa.gov

C:\ED_CARLSON\CLASS\Raw Data\CLS0323.lvl

File Insert Delete Edit

```
P L12345   CORBIN, VIRGINIA LEVEL TIES, 2006
I 243 332228   200 H 396 27226          396 27227          CM 0.00 C R 1 2
C 243 332228   1253 060323  0.035 Y   9.0 C
B DXD DXD 1002 OBSERVATORY                9.0 0 2 1253 060323 1 0.00 0.3 1.3 O              4
S  1 1.27200  4 0.05 46.64 2.10368  4 0.04 45.67   8.8   7.8
S  2 1.32142  5 0.09 59.02 1.75069  5 0.06 58.58  10.1   9.9
S  3 1.30301  5 0.08 56.15 1.37158  5 0.09 58.13  11.0   9.0
S  4 1.29570  6 0.07 53.21 1.41073  6 0.05 49.07  10.9  11.7
S  5 1.09256  6 0.03 18.62 1.64892  4 0.03 18.82  12.7  12.0
S  6 1.20001  3 0.03 15.04 1.72148  7 0.01 16.13  10.2  10.2
E    6                        10.2 0 2 1320   6   2.3  495.1   -2.52238  10.6  10.1   1    11
B DXD DXD 1003 TWIN OAK                  11.3 1 2 1328 060323 1 0.00 0.3 1.3 O              12
S  1 1.71773  6 0.02 15.76 1.22547  3 0.02 15.06  10.2   9.1
S  2 2.07609  5 0.05 57.33 1.46530  8 0.09 58.78  12.2  11.1
S  3 1.41191 10 0.06 55.71 1.05295  6 0.07 54.86  10.4  10.0
S  4 1.69052  7 0.08 55.43 1.47484  5 0.05 54.97  11.0   9.8
S  5 1.44852  7 0.07 37.60 0.79303  7 0.05 36.03  11.3  10.3
S  6 1.79289  6 0.05 25.46 1.60524  6 0.03 27.40  11.8  10.2
E   12                         10.2 1 2 1350   6   0.2  494.4    2.52083  11.1  10.1   1    19
I 243 332228   200 H 396 27226          396 27227          CM      C R 1 2
C 243 332228   1407 060323  0.035 Y   9.2 C
B          1002 OBSERVATORY               9.2 1 2 1407 060323 1      0.3 1.3 O              22
S  1 1.22211  3 0.03 22.27 1.16593  5 0.02 21.88  10.4   9.8
S  2 1.30328  5 0.02  8.98 1.35296  4 0.02  9.02  12.4  10.2
E    2                        10.2 1 2 1416   2   0.3   62.1    0.00650  11.4  10.0   1    25
I 243 332228   200 H 396 27226          396 27227          CM      C R 1 2
C 243 332228   1433 060323  0.035 Y  11.0 C
B          1001 7550002                  11.0 1 2 1433 060323 1      0.3 1.3 O              28
```

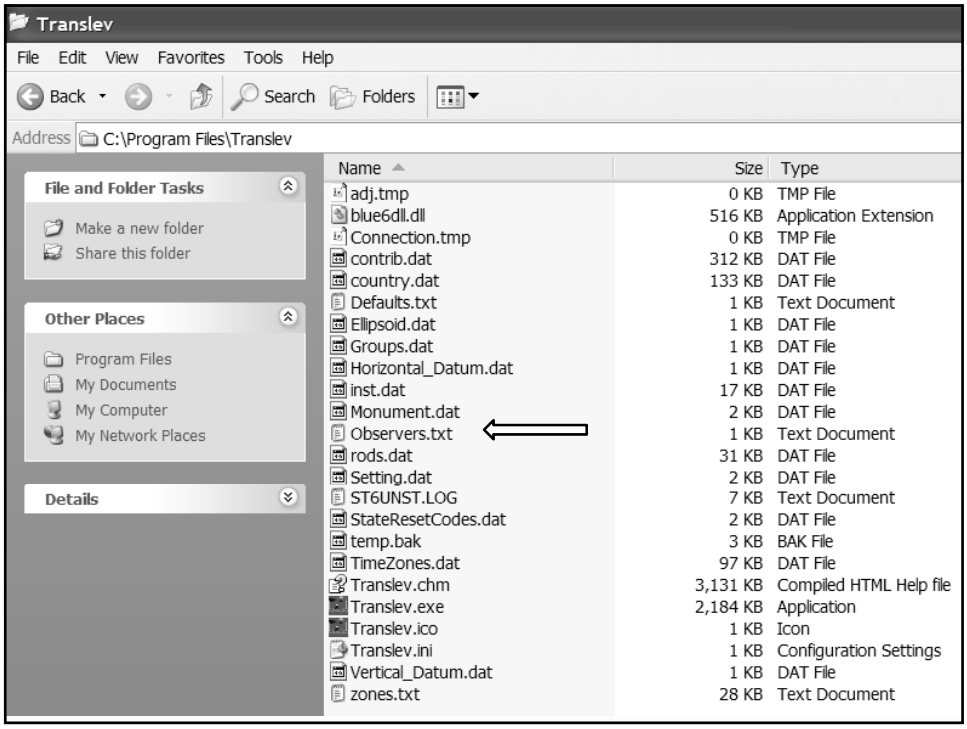
Line 4 | Col 1 | Caps Lock | Insert

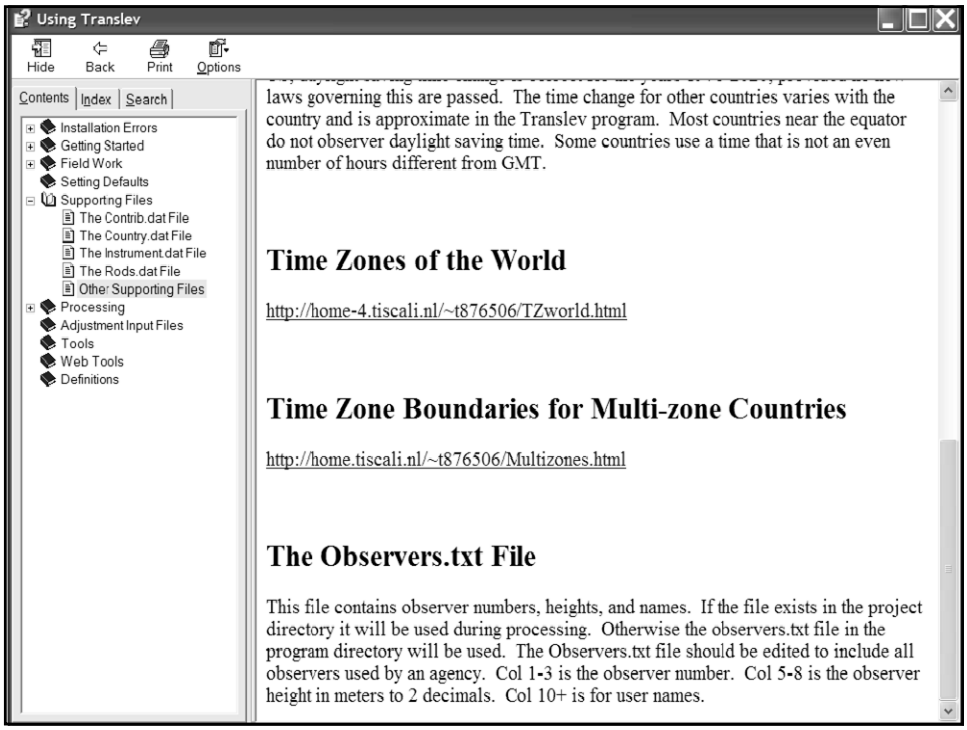
LVL File Editor

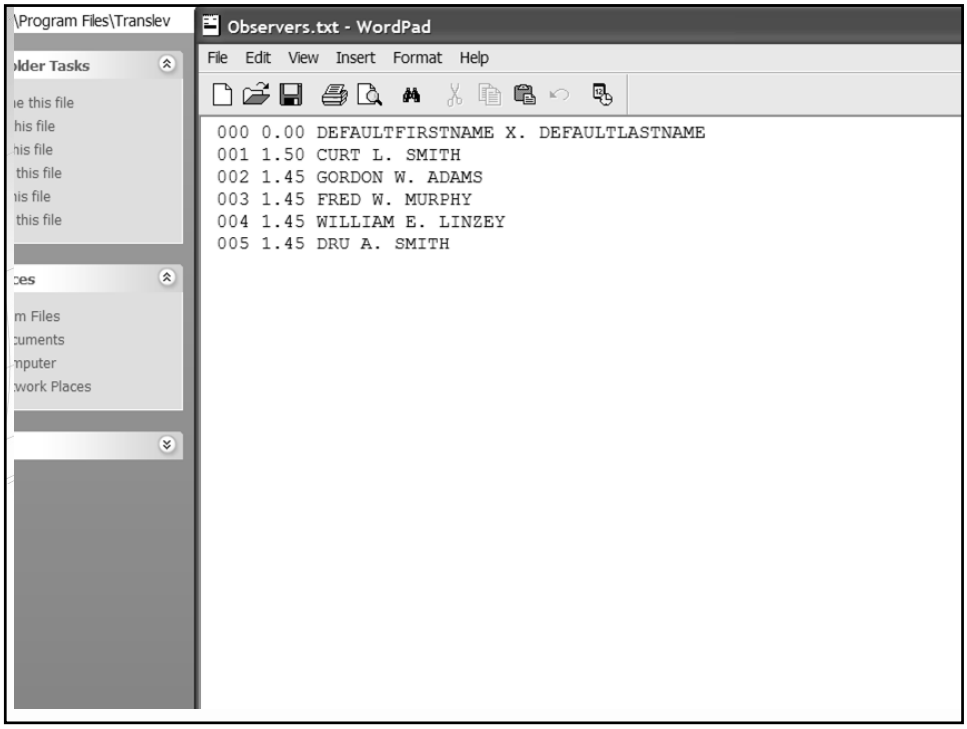
```
LINE  COL   ERROR/WARNING
   4 03-05 Error-Invalid observer's initials
   4 07-09 Error-Invalid recorder's initials
   4 66-69 Error-Height of instrument zero
  11 08-32 Error-Ending mark designation for point 6 blank
```

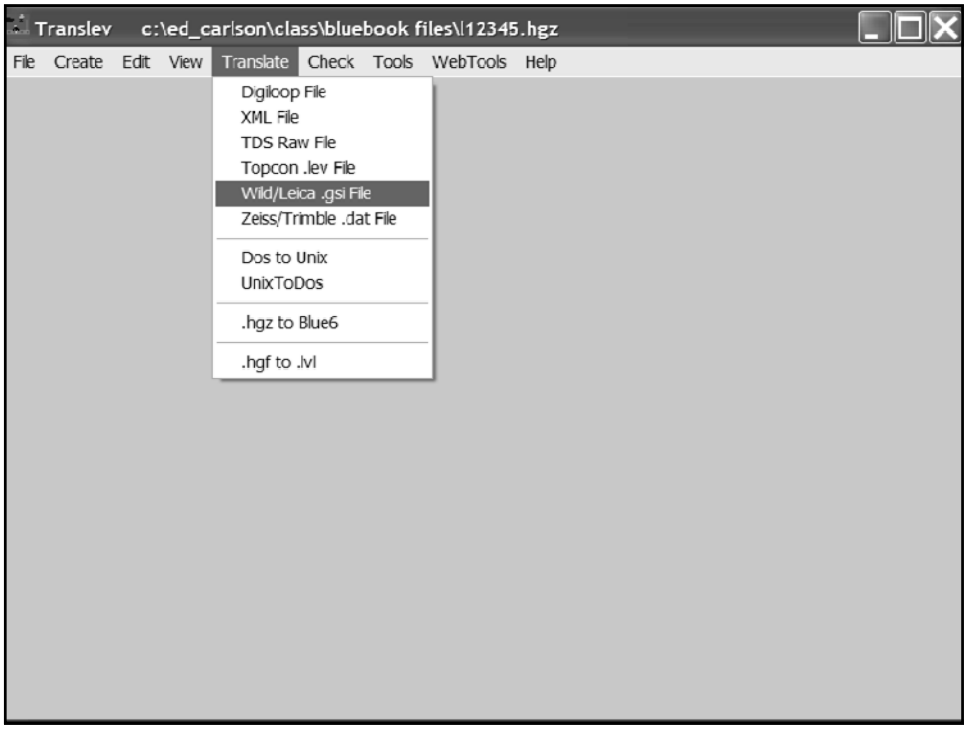
Record Type	B Line Number 4
Observer's Initials (aaa)	DXD ⇐
Recorder's Initials (aaa)	DXD ⇐
Survey Point number (nnnn)	1002
Designation	OBSERVATORY
Temperature (nnn.n)	9.0
Wind Indicator (0,1,2)	0
Sun Indicator (0,1,2)	2
Time (hhmm)	1253
Date (yymmdd)	060323
Rod On Mark (1,2)	1
Height of Instr. (n.nn)	0.00 ⇐
Lower Probe Ht (n.n)	0.3
Upper Probe Ht (n.n)	1.3
Source of Temps (P,O)	O

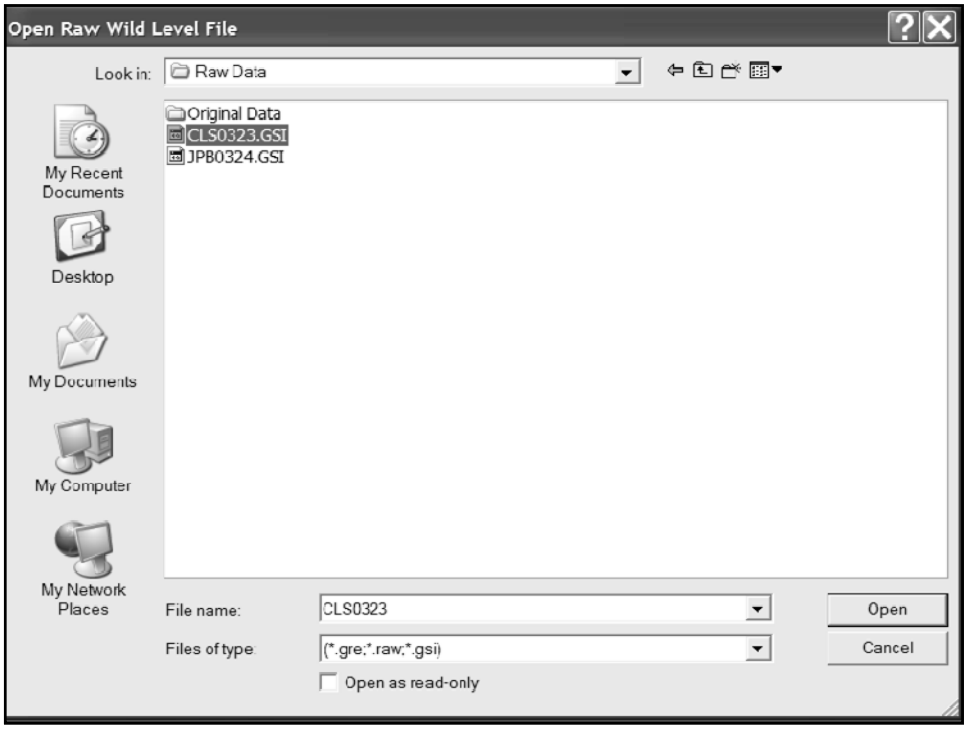
Okay Cancel

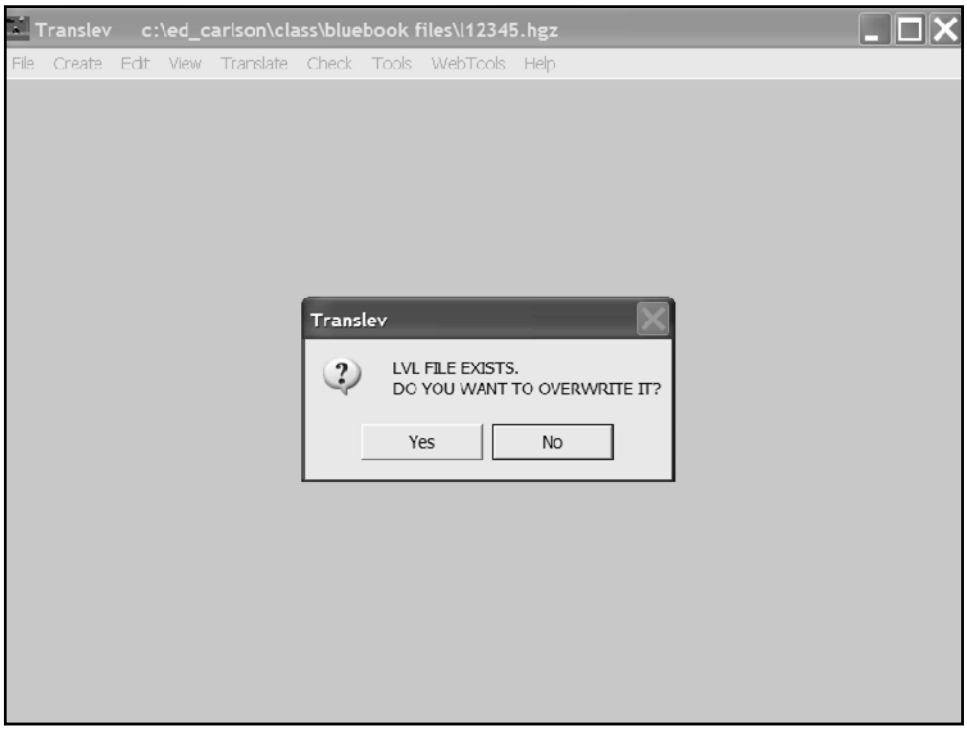

Translev
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Program Files\Translev
File and Folder Tasks
Make a new folder
Share this folder
Other Places
Program Files
My Documents
My Computer
My Network Places
Details
Name Size Type
adj.tmp 0 KB TMP File
blue6dll.dll 516 KB Application Extension
Connection.tmp 0 KB TMP File
contrib.dat 312 KB DAT File
country.dat 133 KB DAT File
Defaults.txt 1 KB Text Document
Ellipsoid.dat 1 KB DAT File
Groups.dat 1 KB DAT File
Horizontal_Datum.dat 1 KB DAT File
inst.dat 17 KB DAT File
Monument.dat 2 KB DAT File
Observers.txt 1 KB Text Document
rods.dat 31 KB DAT File
Setting.dat 2 KB DAT File
ST6UNST.LOG 7 KB Text Document
StateResetCodes.dat 2 KB DAT File
temp.bak 3 KB BAK File
TimeZones.dat 97 KB DAT File
Translev.chm 3,131 KB Compiled HTML Help file
Translev.exe 2,184 KB Application
Translev.ico 1 KB Icon
Translev.ini 1 KB Configuration Settings
Vertical_Datum.dat 1 KB DAT File
zones.txt 28 KB Text Document

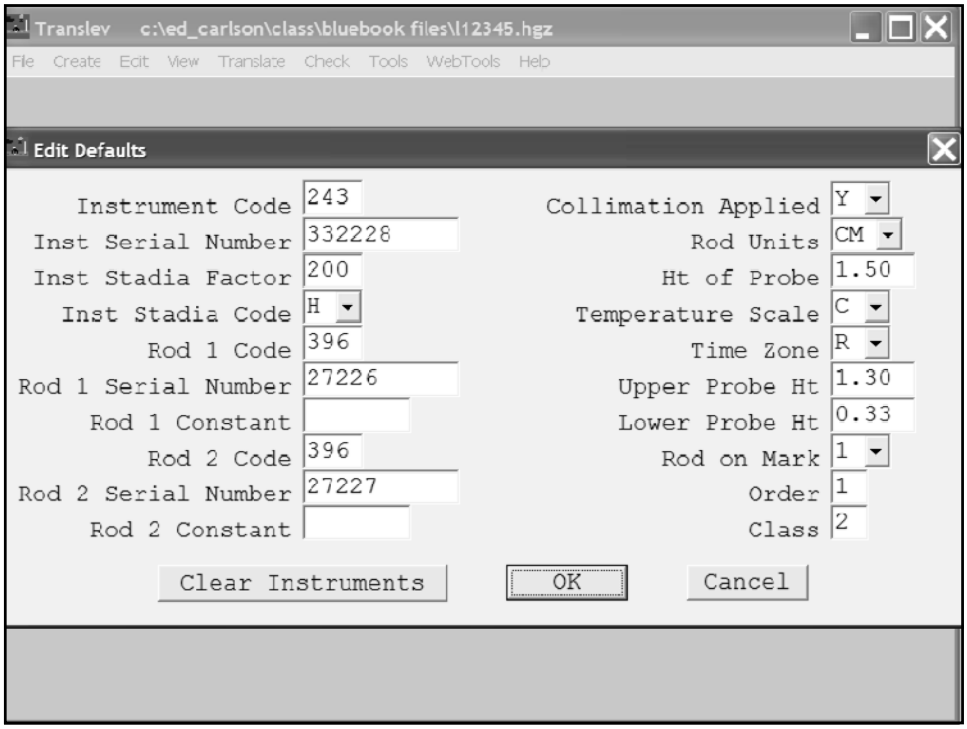

Using Translev
Hide Back Print Options
Contents Index Search
Installation Errors
Getting Started
Field Work
Setting Defaults
Supporting Files
The Contrib.dat File
The Country.dat File
The Instrument.dat File
The Rods.dat File
Other Supporting Files
Processing
Adjustment Input Files
Tools
Web Tools
Definitions
laws governing this are passed. The time change for other countries varies with the country and is approximate in the Translev program. Most countries near the equator do not observer daylight saving time. Some countries use a time that is not an even number of hours different from GMT.
Time Zones of the World
http://home-4.tiscali.nl/~t876506/TZworld.html
Time Zone Boundaries for Multi-zone Countries
http://home.tiscali.nl/~t876506/Multizones.html
The Observers.txt File
This file contains observer numbers, heights, and names. If the file exists in the project directory it will be used during processing. Otherwise the observers.txt file in the program directory will be used. The Observers.txt file should be edited to include all observers used by an agency. Col 1-3 is the observer number. Col 5-8 is the observer height in meters to 2 decimals. Col 10+ is for user names.

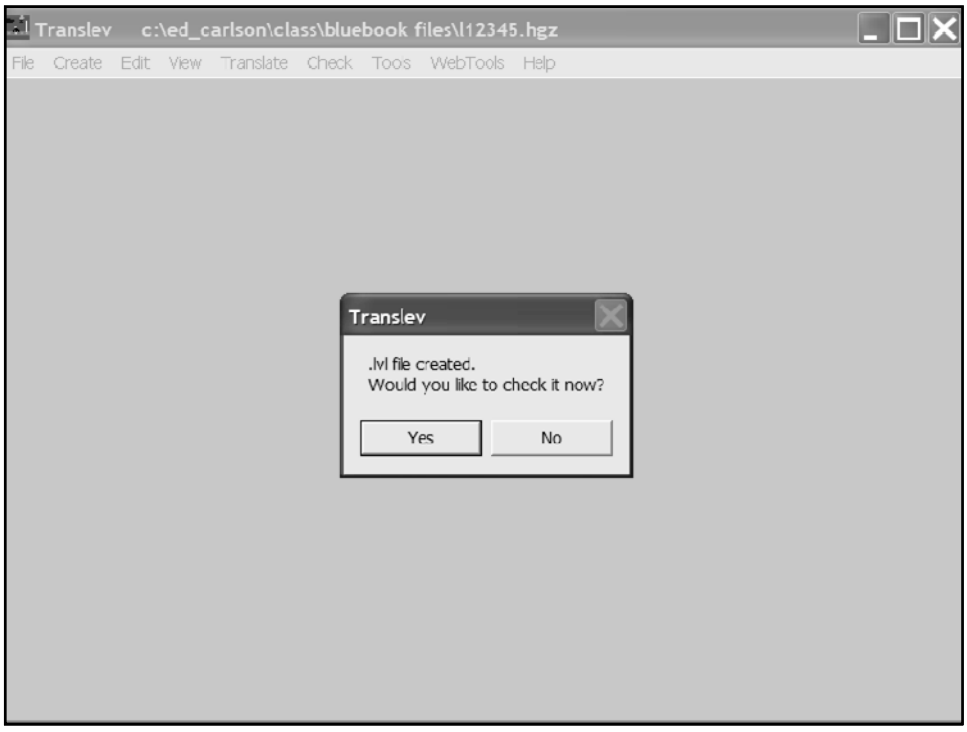

\Program Files\Translev
Observers.txt - WordPad
File Edit View Insert Format Help
000 0.00 DEFAULTFIRSTNAME X. DEFAULTLASTNAME
001 1.50 CURT L. SMITH
002 1.45 GORDON W. ADAMS
003 1.45 FRED W. MURPHY
004 1.45 WILLIAM E. LINZEY
005 1.45 DRU A. SMITH

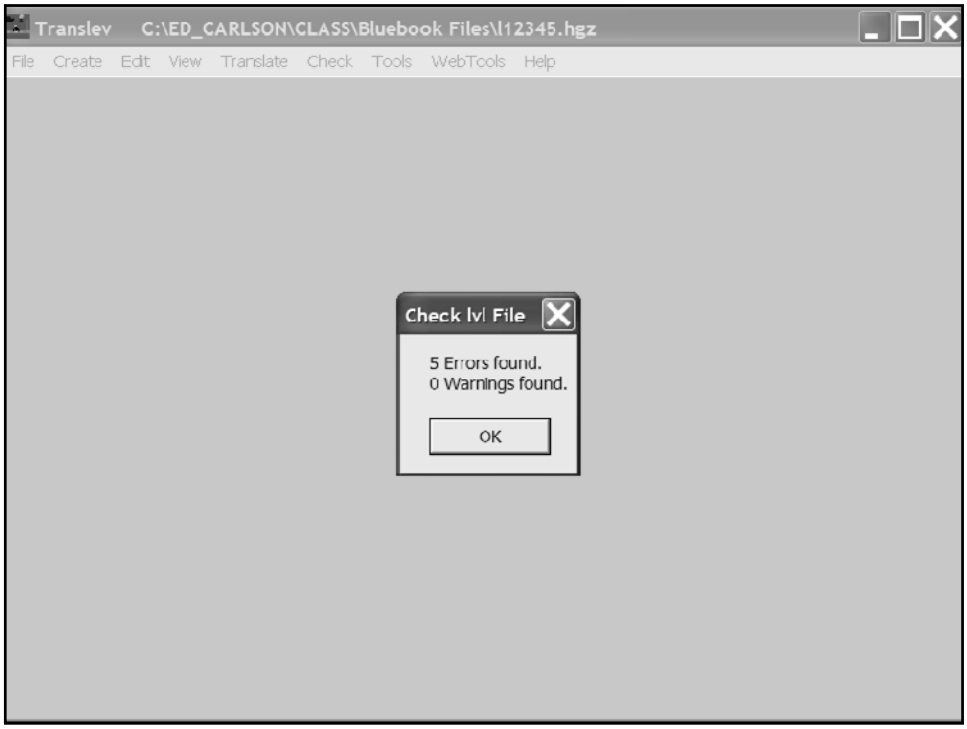

Translev c:\ed_carlson\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Digilcop File
XML File
TDS Raw File
Topcon .lev File
Wild/Leica .gsi File
Zeiss/Trimble .dat File
Dos to Unix
UnixToDos
.hgz to Blue6
.hgf to .lvl

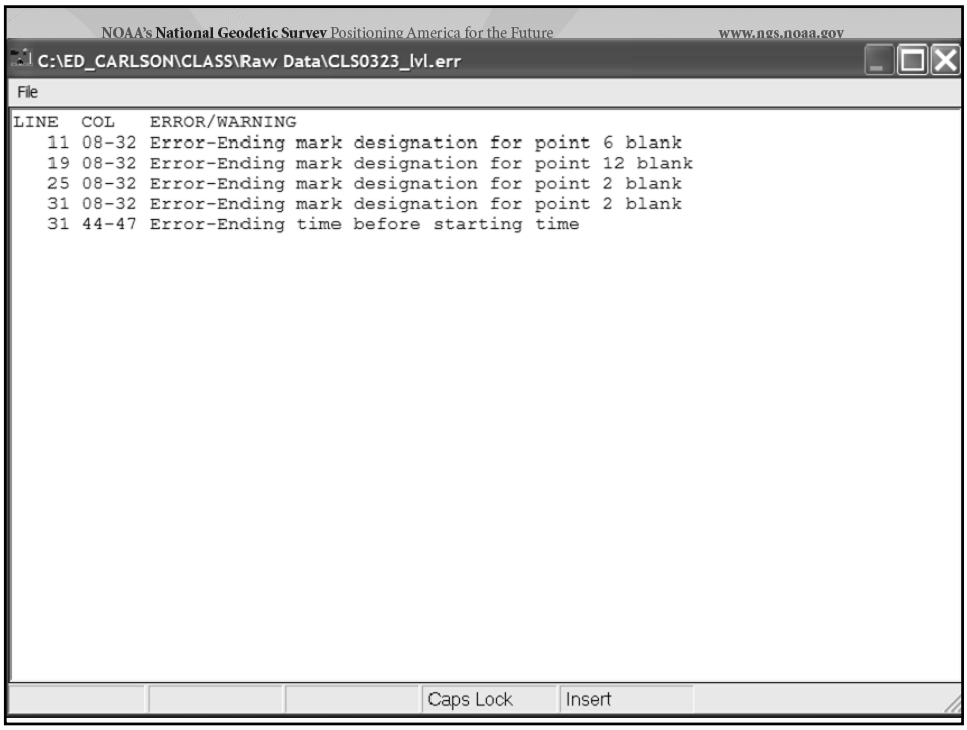

Open Raw Wild Level File
Look in:
Raw Data
Original Data
CLS0323.GSI
JPB0324.GSI
My Recent Documents
Desktop
My Documents
My Computer
My Network Places
File name:
CLS0323
Files of type:
(*.gre;*.raw;*.gsi)
Open as read-only
Open
Cancel

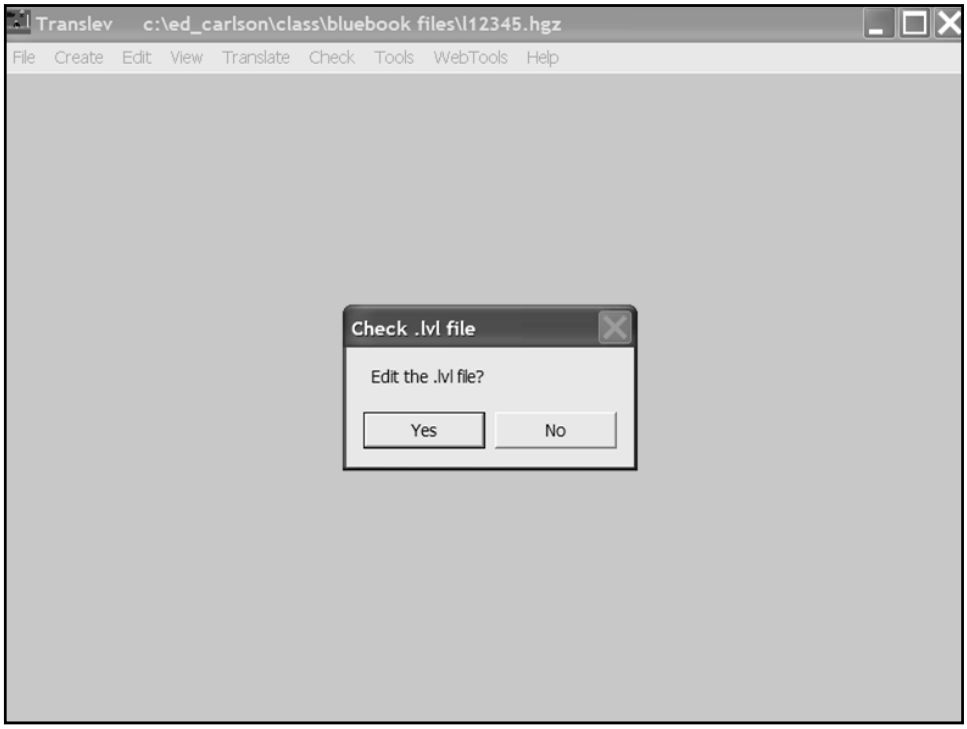

Translev c:\ed_carlson\class\bluebook files\12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Translev
LVL FILE EXISTS.
DO YOU WANT TO OVERWRITE IT?
Yes
No

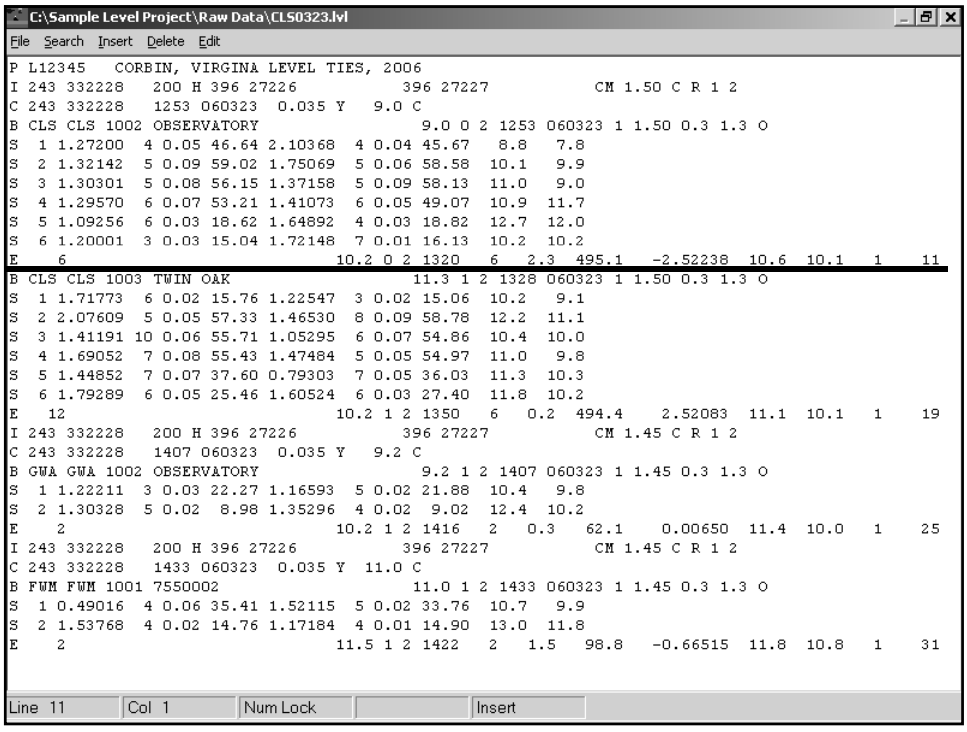

Translev c:\ed_carlson\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Edit Defaults
Instrument Code 243
Inst Serial Number 332228
Inst Stadia Factor 200
Inst Stadia Code H
Rod 1 Code 396
Rod 1 Serial Number 27226
Rod 1 Constant
Rod 2 Code 396
Rod 2 Serial Number 27227
Rod 2 Constant
Collimation Applied Y
Rod Units CM
Ht of Probe 1.50
Temperature Scale C
Time Zone R
Upper Probe Ht 1.30
Lower Probe Ht 0.33
Rod on Mark 1
Order 1
Class 2
Clear Instruments
OK
Cancel

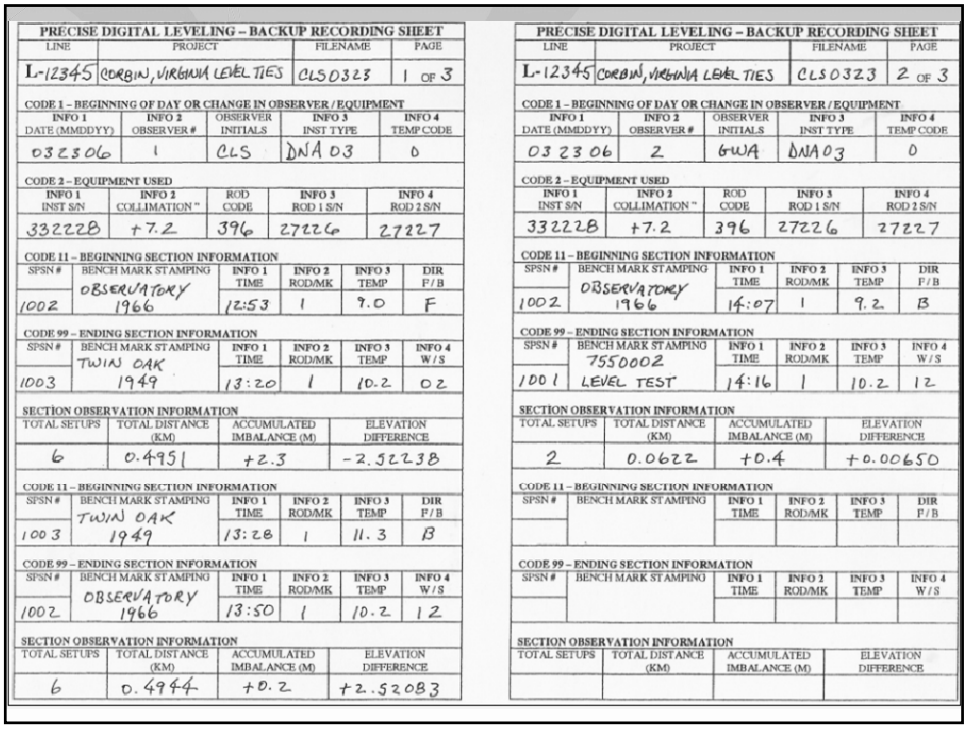

Translev c:\ed_carlson\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Translev
.lvl file created.
Would you like to check it now?
Yes
No


Transley C:\ED_CARLSON\CLASS\Bluebook Files\12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Check lvl File
5 Errors found.
0 Warnings found.
OK


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
C:\ED_CARLSON\CLASS\Raw Data\CLS0323_lvl.err
File
LINE COL ERROR/WARNING
11 08-32 Error-Ending mark designation for point 6 blank
19 08-32 Error-Ending mark designation for point 12 blank
25 08-32 Error-Ending mark designation for point 2 blank
31 08-32 Error-Ending mark designation for point 2 blank
31 44-47 Error-Ending time before starting time
Caps Lock
Insert


Translev c:\ed_carlson\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Check .lvl file
Edit the .lvl file?
Yes
No


C:\Sample Level Project\Raw Data\CLS0323.lvl
File Search Insert Delete Edit
P L12345 CORBIN, VIRGINA LEVEL TIES, 2006
I 243 332228 200 H 396 27226 396 27227 CM 1.50 C R 1 2
C 243 332228 1253 060323 0.035 Y 9.0 C
B CLS CLS 1002 OBSERVATORY 9.0 0 2 1253 060323 1 1.50 0.3 1.3 O
S 1 1.27200 4 0.05 46.64 2.10368 4 0.04 45.67 8.8 7.8
S 2 1.32142 5 0.09 59.02 1.75069 5 0.06 58.58 10.1 9.9
S 3 1.30301 5 0.08 56.15 1.37158 5 0.09 58.13 11.0 9.0
S 4 1.29570 6 0.07 53.21 1.41073 6 0.05 49.07 10.9 11.7
S 5 1.09256 6 0.03 18.62 1.64892 4 0.03 18.82 12.7 12.0
S 6 1.20001 3 0.03 15.04 1.72148 7 0.01 16.13 10.2 10.2
E 6 10.2 0 2 1320 6 2.3 495.1 -2.52238 10.6 10.1 1 11
B CLS CLS 1003 TWIN OAK 11.3 1 2 1328 060323 1 1.50 0.3 1.3 O
S 1 1.71773 6 0.02 15.76 1.22547 3 0.02 15.06 10.2 9.1
S 2 2.07609 5 0.05 57.33 1.46530 8 0.09 58.78 12.2 11.1
S 3 1.41191 10 0.06 55.71 1.05295 6 0.07 54.86 10.4 10.0
S 4 1.69052 7 0.08 55.43 1.47484 5 0.05 54.97 11.0 9.8
S 5 1.44852 7 0.07 37.60 0.79303 7 0.05 36.03 11.3 10.3
S 6 1.79289 6 0.05 25.46 1.60524 6 0.03 27.40 11.8 10.2
E 12 10.2 1 2 1350 6 0.2 494.4 2.52083 11.1 10.1 1 19
I 243 332228 200 H 396 27226 396 27227 CM 1.45 C R 1 2
C 243 332228 1407 060323 0.035 Y 9.2 C
B GWA GWA 1002 OBSERVATORY 9.2 1 2 1407 060323 1 1.45 0.3 1.3 O
S 1 1.22211 3 0.03 22.27 1.16593 5 0.02 21.88 10.4 9.8
S 2 1.30328 5 0.02 8.98 1.35296 4 0.02 9.02 12.4 10.2
E 2 10.2 1 2 1416 2 0.3 62.1 0.00650 11.4 10.0 1 25
I 243 332228 200 H 396 27226 396 27227 CM 1.45 C R 1 2
C 243 332228 1433 060323 0.035 Y 11.0 C
B FWM FWM 1001 7550002 11.0 1 2 1433 060323 1 1.45 0.3 1.3 O
S 1 0.49016 4 0.06 35.41 1.52115 5 0.02 33.76 10.7 9.9
S 2 1.53768 4 0.02 14.76 1.17184 4 0.01 14.90 13.0 11.8
E 2 11.5 1 2 1422 2 1.5 98.8 -0.66515 11.8 10.8 1 31
Line 11 Col 1 Num Lock Insert



PRECISE DIGITAL LEVELING – BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE
L-12345	CORBIN, VIRGINIA LEVEL TIES	CLS0323	1 OF 3

CODE 1 – BEGINNING OF DAY OR CHANGE IN OBSERVER / EQUIPMENT

INFO 1 DATE (MMDDYY)	INFO 2 OBSERVER #	OBSERVER INITIALS	INFO 3 INST TYPE	INFO 4 TEMP CODE
032306	1	CLS	DNA03	0

CODE 2 – EQUIPMENT USED

INFO 1 INST S/N	INFO 3 COLLIMATION "	ROD CODE	INFO 3 ROD 1 S/N	INFO 4 ROD 2 S/N
332228	+7.2	396	27226	27227

CODE 11 – BEGINNING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F/B
1002	OBSERVATORY 1966	12:53	1	9.0	F

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W/S
1003	TWIN OAK 1949	13:20	1	10.2	02

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE
6	0.4951	+2.3	-2.52238

CODE 11 – BEGINNING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F/B
1003	TWIN OAK 1949	13:28	1	11.3	B

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W/S
1002	OBSERVATORY 1966	13:50	1	10.2	12

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE
6	0.4944	+0.2	+2.52083

PRECISE DIGITAL LEVELING – BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE
L-12345	CORBIN, VIRGINIA LEVEL TIES	CLS0323	2 OF 3

CODE 1 – BEGINNING OF DAY OR CHANGE IN OBSERVER / EQUIPMENT

INFO 1 DATE (MMDDYY)	INFO 2 OBSERVER #	OBSERVER INITIALS	INFO 3 INST TYPE	INFO 4 TEMP CODE
032306	2	GWA	DNA03	0

CODE 2 – EQUIPMENT USED

INFO 1 INST S/N	INFO 3 COLLIMATION "	ROD CODE	INFO 3 ROD 1 S/N	INFO 4 ROD 2 S/N
332228	+7.2	396	27226	27227

CODE 11 – BEGINNING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F/B
1002	OBSERVATORY 1966	14:07	1	9.2	B

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W/S
1001	7550002 LEVEL TEST	14:16	1	10.2	12

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE
2	0.0622	+0.4	+0.00650

CODE 11 – BEGINNING SECTION INFORMATION

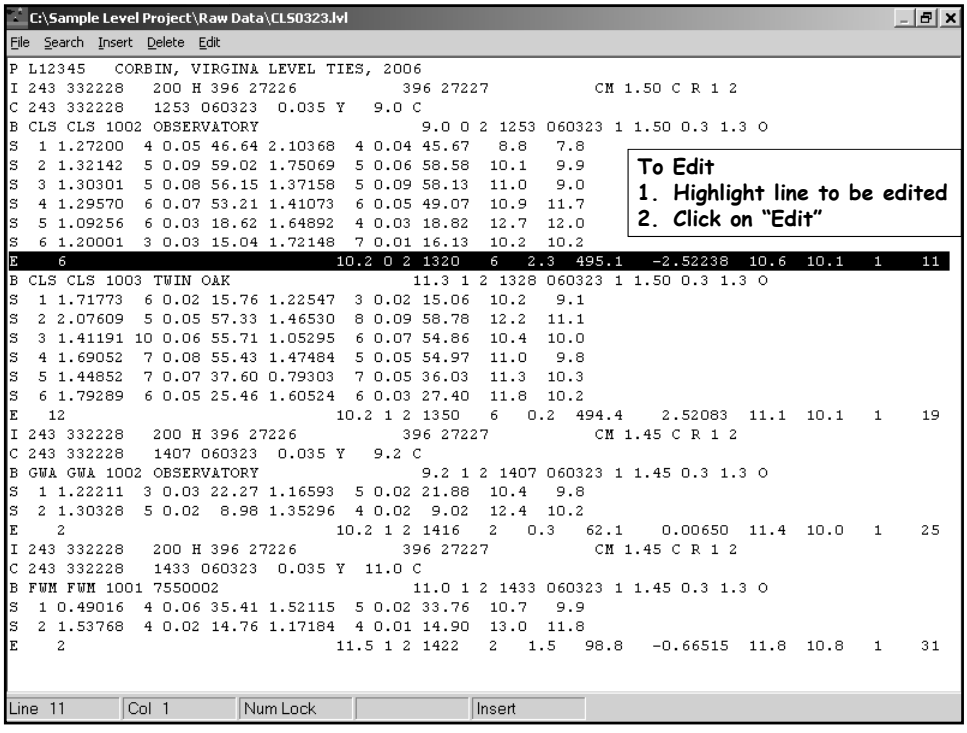
SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F/B

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W/S

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE



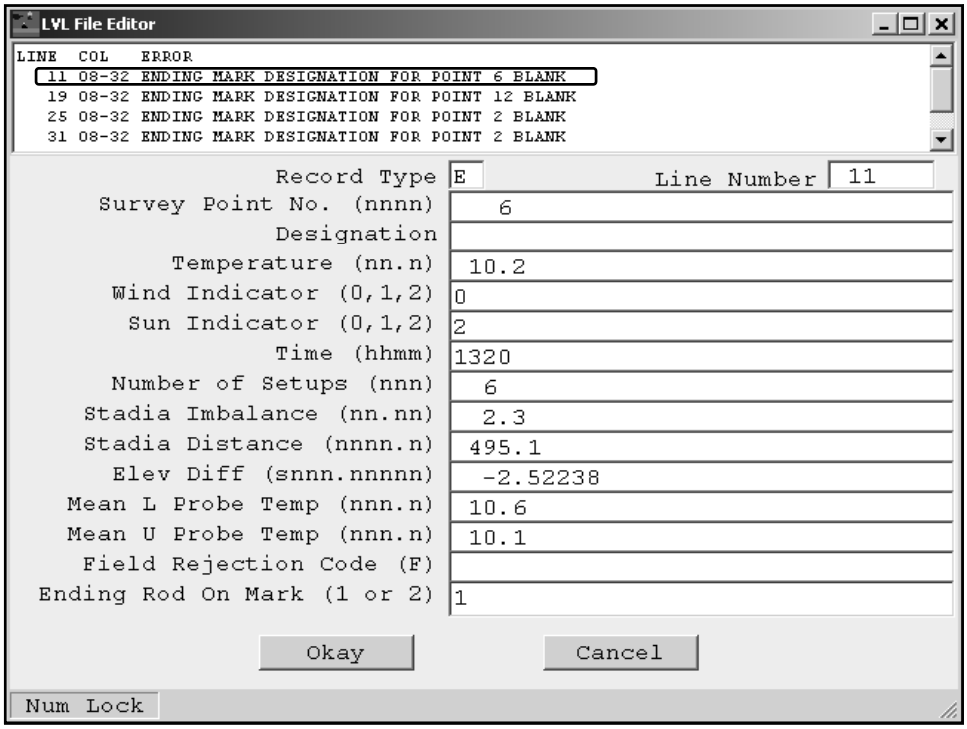
C:\Sample Level Project\Raw Data\CLS0323.lvl

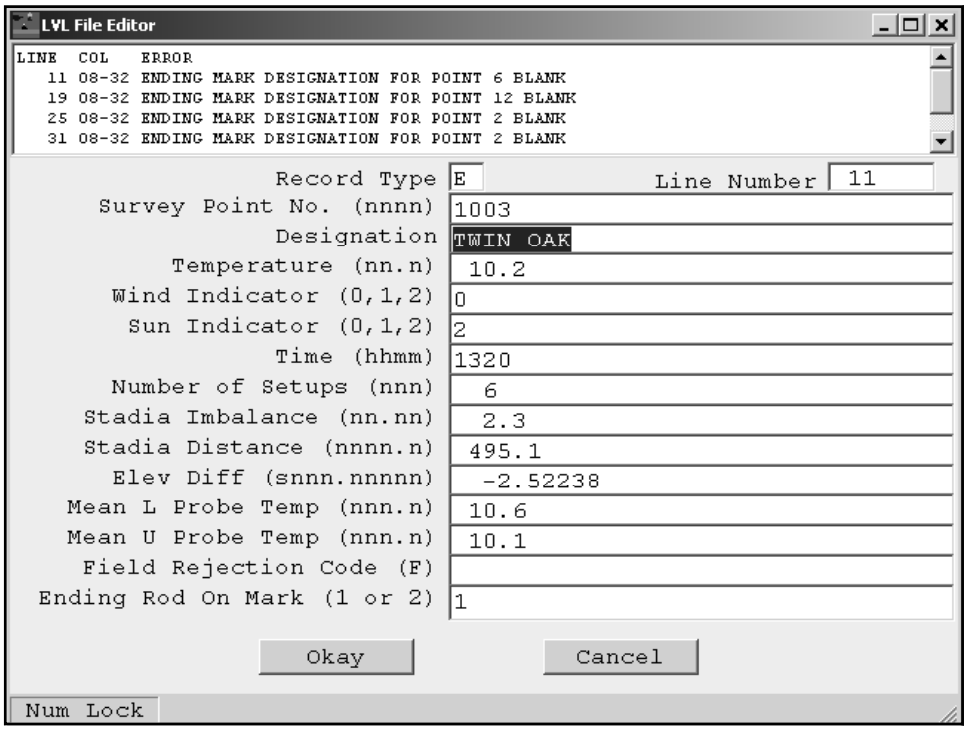
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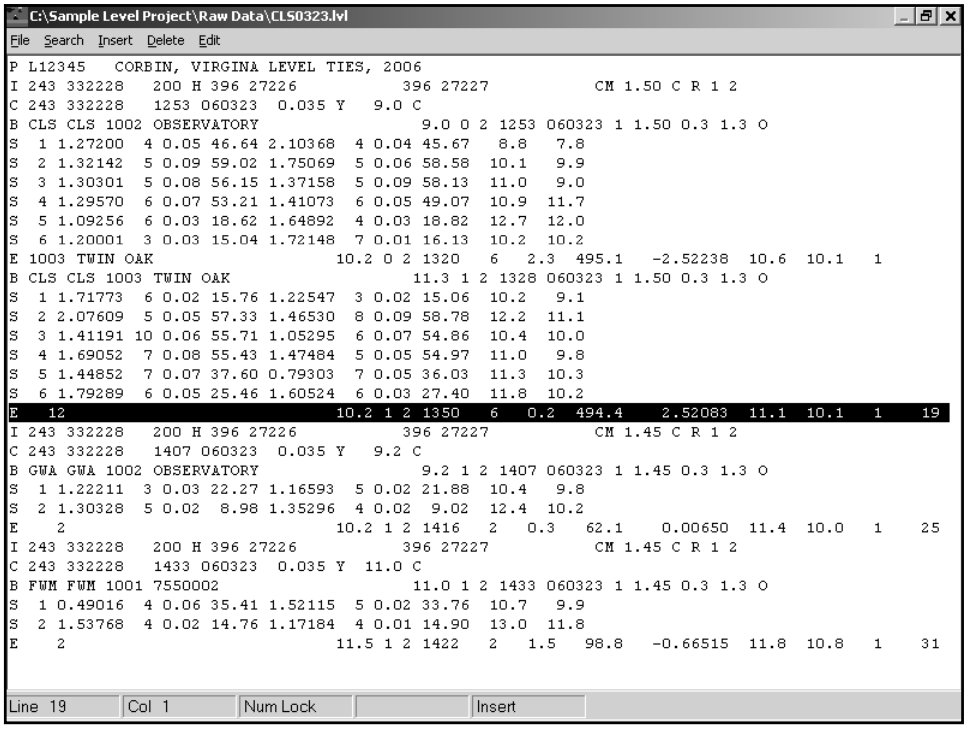
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I 243 332228   200 H 396 27226          396 27227          CM 1.50 C R 1 2
C 243 332228   1253 060323  0.035 Y   9.0 C
B CLS CLS 1002 OBSERVATORY                9.0 0 2 1253 060323 1 1.50 0.3 1.3 O
S  1 1.27200  4 0.05 46.64 2.10368  4 0.04 45.67   8.8   7.8
S  2 1.32142  5 0.09 59.02 1.75069  5 0.06 58.58  10.1   9.9
S  3 1.30301  5 0.08 56.15 1.37158  5 0.09 58.13  11.0   9.0
S  4 1.29570  6 0.07 53.21 1.41073  6 0.05 49.07  10.9  11.7
S  5 1.09256  6 0.03 18.62 1.64892  4 0.03 18.82  12.7  12.0
S  6 1.20001  3 0.03 15.04 1.72148  7 0.01 16.13  10.2  10.2
E    6                          10.2 0 2 1320   6   2.3  495.1   -2.52238  10.6  10.1   1    11
B CLS CLS 1003 TWIN OAK                  11.3 1 2 1328 060323 1 1.50 0.3 1.3 O
S  1 1.71773  6 0.02 15.76 1.22547  3 0.02 15.06  10.2   9.1
S  2 2.07609  5 0.05 57.33 1.46530  8 0.09 58.78  12.2  11.1
S  3 1.41191 10 0.06 55.71 1.05295  6 0.07 54.86  10.4  10.0
S  4 1.69052  7 0.08 55.43 1.47484  5 0.05 54.97  11.0   9.8
S  5 1.44852  7 0.07 37.60 0.79303  7 0.05 36.03  11.3  10.3
S  6 1.79289  6 0.05 25.46 1.60524  6 0.03 27.40  11.8  10.2
E   12                         10.2 1 2 1350   6   0.2  494.4    2.52083  11.1  10.1   1    19
I 243 332228   200 H 396 27226          396 27227          CM 1.45 C R 1 2
C 243 332228   1407 060323  0.035 Y   9.2 C
B GWA GWA 1002 OBSERVATORY                9.2 1 2 1407 060323 1 1.45 0.3 1.3 O
S  1 1.22211  3 0.03 22.27 1.16593  5 0.02 21.88  10.4   9.8
S  2 1.30328  5 0.02  8.98 1.35296  4 0.02  9.02  12.4  10.2
E    2                          10.2 1 2 1416   2   0.3   62.1    0.00650  11.4  10.0   1    25
I 243 332228   200 H 396 27226          396 27227          CM 1.45 C R 1 2
C 243 332228   1433 060323  0.035 Y  11.0 C
B FWM FWM 1001 7550002                   11.0 1 2 1433 060323 1 1.45 0.3 1.3 O
S  1 0.49016  4 0.06 35.41 1.52115  5 0.02 33.76  10.7   9.9
S  2 1.53768  4 0.02 14.76 1.17184  4 0.01 14.90  13.0  11.8
E    2                          11.5 1 2 1422   2   1.5   98.8   -0.66515  11.8  10.8   1    31
```

To Edit
1. **Highlight line to be edited**
2. **Click on "Edit"**

Line 11 | Col 1 | Num Lock | | Insert


LVL File Editor
LINE COL ERROR
11 08-32 ENDING MARK DESIGNATION FOR POINT 6 BLANK
19 08-32 ENDING MARK DESIGNATION FOR POINT 12 BLANK
25 08-32 ENDING MARK DESIGNATION FOR POINT 2 BLANK
31 08-32 ENDING MARK DESIGNATION FOR POINT 2 BLANK
Record Type E
Line Number 11
Survey Point No. (nnnn) 6
Designation
Temperature (nn.n) 10.2
Wind Indicator (0,1,2) 0
Sun Indicator (0,1,2) 2
Time (hhmm) 1320
Number of Setups (nnn) 6
Stadia Imbalance (nn.nn) 2.3
Stadia Distance (nnnn.n) 495.1
Elev Diff (snnn.nnnnn) -2.52238
Mean L Probe Temp (nnn.n) 10.6
Mean U Probe Temp (nnn.n) 10.1
Field Rejection Code (F)
Ending Rod On Mark (1 or 2) 1
Okay
Cancel
Num Lock


LVL File Editor
LINE COL ERROR
11 08-32 ENDING MARK DESIGNATION FOR POINT 6 BLANK
19 08-32 ENDING MARK DESIGNATION FOR POINT 12 BLANK
25 08-32 ENDING MARK DESIGNATION FOR POINT 2 BLANK
31 08-32 ENDING MARK DESIGNATION FOR POINT 2 BLANK
Record Type E
Line Number 11
Survey Point No. (nnnn) 1003
Designation TWIN OAK
Temperature (nn.n) 10.2
Wind Indicator (0,1,2) 0
Sun Indicator (0,1,2) 2
Time (hhmm) 1320
Number of Setups (nnn) 6
Stadia Imbalance (nn.nn) 2.3
Stadia Distance (nnnn.n) 495.1
Elev Diff (snnn.nnnnn) -2.52238
Mean L Probe Temp (nnn.n) 10.6
Mean U Probe Temp (nnn.n) 10.1
Field Rejection Code (F)
Ending Rod On Mark (1 or 2) 1
Okay
Cancel
Num Lock

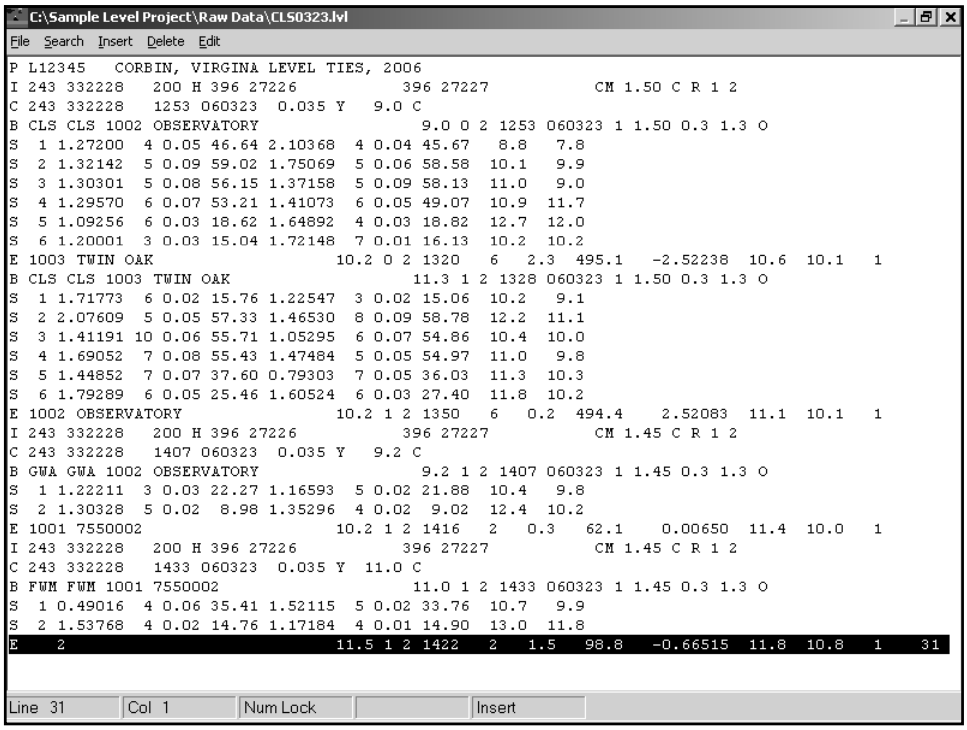


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P L12345   CORBIN, VIRGINA LEVEL TIES, 2006
I 243 332228   200 H 396 27226           396 27227           CM 1.50 C R 1 2
C 243 332228   1253 060323  0.035 Y   9.0 C
B CLS CLS 1002 OBSERVATORY                 9.0 0 2 1253 060323 1 1.50 0.3 1.3 O
S  1 1.27200  4 0.05 46.64 2.10368  4 0.04 45.67   8.8   7.8
S  2 1.32142  5 0.09 59.02 1.75069  5 0.06 58.58  10.1   9.9
S  3 1.30301  5 0.08 56.15 1.37158  5 0.09 58.13  11.0   9.0
S  4 1.29570  6 0.07 53.21 1.41073  6 0.05 49.07  10.9  11.7
S  5 1.09256  6 0.03 18.62 1.64892  4 0.03 18.82  12.7  12.0
S  6 1.20001  3 0.03 15.04 1.72148  7 0.01 16.13  10.2  10.2
E 1003 TWIN OAK                  10.2 0 2 1320   6   2.3  495.1   -2.52238  10.6  10.1   1
B CLS CLS 1003 TWIN OAK                 11.3 1 2 1328 060323 1 1.50 0.3 1.3 O
S  1 1.71773  6 0.02 15.76 1.22547  3 0.02 15.06  10.2   9.1
S  2 2.07609  5 0.05 57.33 1.46530  8 0.09 58.78  12.2  11.1
S  3 1.41191 10 0.06 55.71 1.05295  6 0.07 54.86  10.4  10.0
S  4 1.69052  7 0.08 55.43 1.47484  5 0.05 54.97  11.0   9.8
S  5 1.44852  7 0.07 37.60 0.79303  7 0.05 36.03  11.3  10.3
S  6 1.79289  6 0.05 25.46 1.60524  6 0.03 27.40  11.8  10.2
E   12                           10.2 1 2 1350   6   0.2  494.4    2.52083  11.1  10.1   1    19
I 243 332228   200 H 396 27226           396 27227           CM 1.45 C R 1 2
C 243 332228   1407 060323  0.035 Y   9.2 C
B GWA GWA 1002 OBSERVATORY                 9.2 1 2 1407 060323 1 1.45 0.3 1.3 O
S  1 1.22211  3 0.03 22.27 1.16593  5 0.02 21.88  10.4   9.8
S  2 1.30328  5 0.02  8.98 1.35296  4 0.02  9.02  12.4  10.2
E    2                           10.2 1 2 1416   2   0.3   62.1    0.00650  11.4  10.0   1    25
I 243 332228   200 H 396 27226           396 27227           CM 1.45 C R 1 2
C 243 332228   1433 060323  0.035 Y  11.0 C
B FWM FWM 1001 7550002                 11.0 1 2 1433 060323 1 1.45 0.3 1.3 O
S  1 0.49016  4 0.06 35.41 1.52115  5 0.02 33.76  10.7   9.9
S  2 1.53768  4 0.02 14.76 1.17184  4 0.01 14.90  13.0  11.8
E    2                           11.5 1 2 1422   2   1.5   98.8   -0.66515  11.8  10.8   1    31
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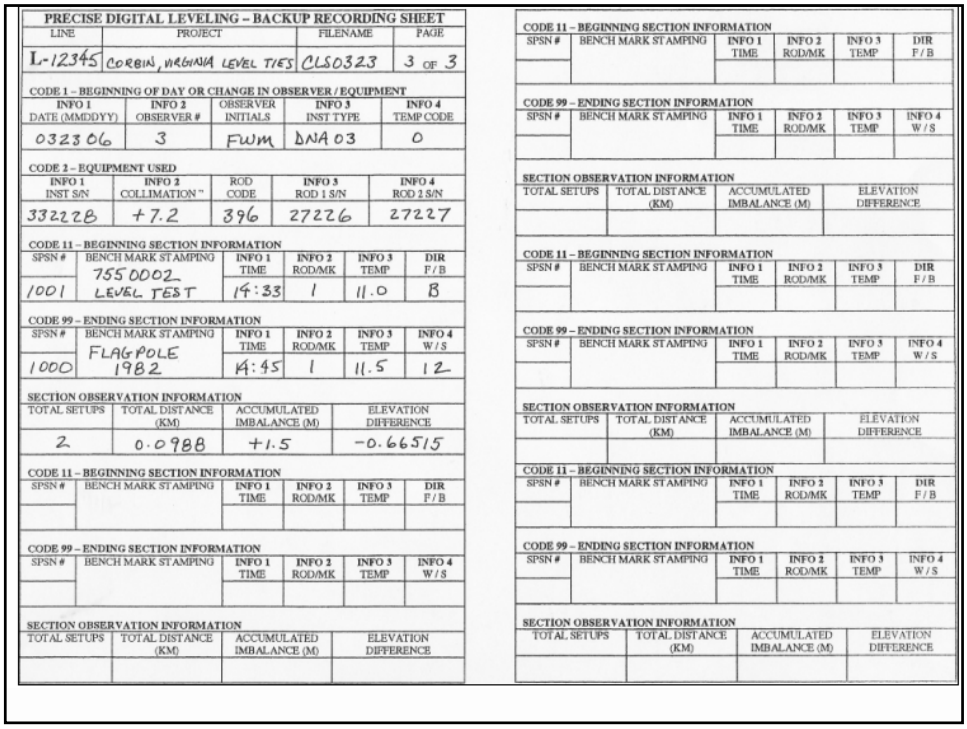


C:\Sample Level Project\Raw Data\CLS0323.lvl

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P L12345   CORBIN, VIRGINA LEVEL TIES, 2006
I 243 332228   200 H 396 27226           396 27227           CM 1.50 C R 1 2
C 243 332228   1253 060323  0.035 Y   9.0 C
B CLS CLS 1002 OBSERVATORY                 9.0 0 2 1253 060323 1 1.50 0.3 1.3 O
S  1 1.27200  4 0.05 46.64 2.10368  4 0.04 45.67   8.8   7.8
S  2 1.32142  5 0.09 59.02 1.75069  5 0.06 58.58  10.1   9.9
S  3 1.30301  5 0.08 56.15 1.37158  5 0.09 58.13  11.0   9.0
S  4 1.29570  6 0.07 53.21 1.41073  6 0.05 49.07  10.9  11.7
S  5 1.09256  6 0.03 18.62 1.64892  4 0.03 18.82  12.7  12.0
S  6 1.20001  3 0.03 15.04 1.72148  7 0.01 16.13  10.2  10.2
E 1003 TWIN OAK                  10.2 0 2 1320   6   2.3  495.1   -2.52238  10.6  10.1   1
B CLS CLS 1003 TWIN OAK                 11.3 1 2 1328 060323 1 1.50 0.3 1.3 O
S  1 1.71773  6 0.02 15.76 1.22547  3 0.02 15.06  10.2   9.1
S  2 2.07609  5 0.05 57.33 1.46530  8 0.09 58.78  12.2  11.1
S  3 1.41191 10 0.06 55.71 1.05295  6 0.07 54.86  10.4  10.0
S  4 1.69052  7 0.08 55.43 1.47484  5 0.05 54.97  11.0   9.8
S  5 1.44852  7 0.07 37.60 0.79303  7 0.05 36.03  11.3  10.3
S  6 1.79289  6 0.05 25.46 1.60524  6 0.03 27.40  11.8  10.2
E 1002 OBSERVATORY               10.2 1 2 1350   6   0.2  494.4    2.52083  11.1  10.1   1
I 243 332228   200 H 396 27226           396 27227           CM 1.45 C R 1 2
C 243 332228   1407 060323  0.035 Y   9.2 C
B GWA GWA 1002 OBSERVATORY                 9.2 1 2 1407 060323 1 1.45 0.3 1.3 O
S  1 1.22211  3 0.03 22.27 1.16593  5 0.02 21.88  10.4   9.8
S  2 1.30328  5 0.02  8.98 1.35296  4 0.02  9.02  12.4  10.2
E 1001 7550002                   10.2 1 2 1416   2   0.3   62.1    0.00650  11.4  10.0   1
I 243 332228   200 H 396 27226           396 27227           CM 1.45 C R 1 2
C 243 332228   1433 060323  0.035 Y  11.0 C
B FWM FWM 1001 7550002                 11.0 1 2 1433 060323 1 1.45 0.3 1.3 O
S  1 0.49016  4 0.06 35.41 1.52115  5 0.02 33.76  10.7   9.9
S  2 1.53768  4 0.02 14.76 1.17184  4 0.01 14.90  13.0  11.8
E    2                           11.5 1 2 1422   2   1.5   98.8   -0.66515  11.8  10.8   1    31
```

Line 31 | Col 1 | Num Lock | | Insert



PRECISE DIGITAL LEVELING – BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE
L-12345	CORBIN, VIRGINIA LEVEL TIES	CLS0323	3 OF 3

CODE 1 – BEGINNING OF DAY OR CHANGE IN OBSERVER / EQUIPMENT

INFO 1 DATE (MMDDYY)	INFO 2 OBSERVER #	OBSERVER INITIALS	INFO 3 INST TYPE	INFO 4 TEMP CODE
032306	3	FWM	DNA03	0

CODE 2 – EQUIPMENT USED

INFO 1 INST S/N	INFO 2 COLLIMATION "	ROD CODE	INFO 3 ROD 1 S/N	INFO 4 ROD 2 S/N
332228	+7.2	396	27226	27227

CODE 11 – BEGINNING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F / B
1001	7550002 LEVEL TEST	14:33	1	11.0	B

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W / S
1000	FLAGPOLE 1982	14:45	1	11.5	12

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE
2	0.0988	+1.5	-0.66515

CODE 11 – BEGINNING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F / B

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W / S

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE

CODE 11 – BEGINNING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	DIR F / B

CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W / S

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE

CODE 11 – BEGINNING SECTION INFORMATION

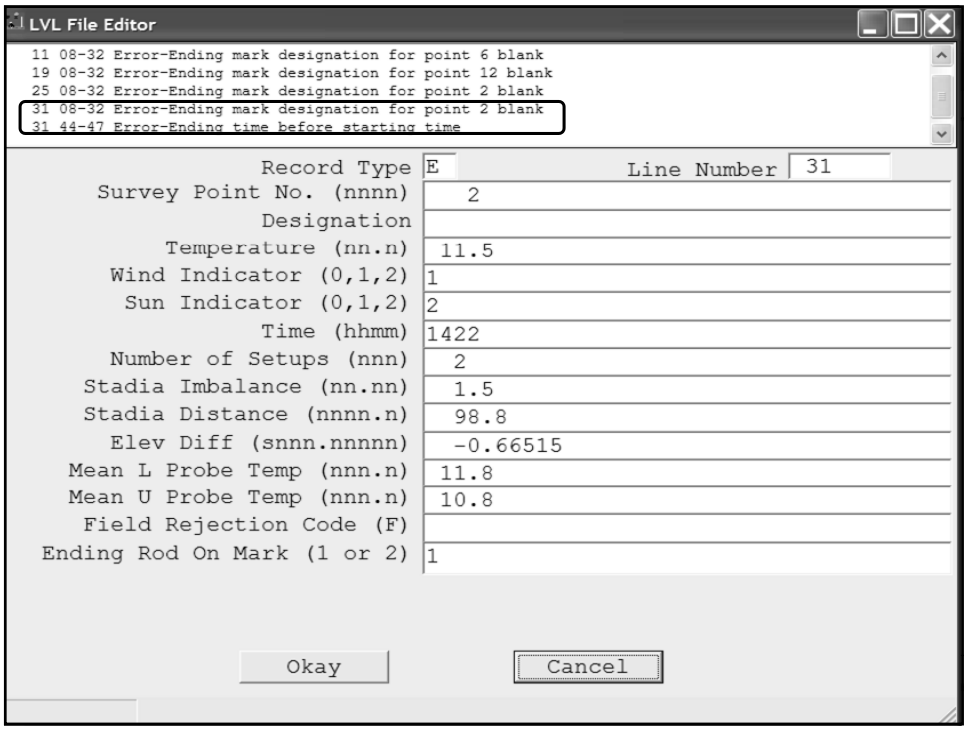
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CODE 99 – ENDING SECTION INFORMATION

SPSN #	BENCH MARK STAMPING	INFO 1 TIME	INFO 2 ROD/MK	INFO 3 TEMP	INFO 4 W / S

SECTION OBSERVATION INFORMATION

TOTAL SETUPS	TOTAL DISTANCE (KM)	ACCUMULATED IMBALANCE (M)	ELEVATION DIFFERENCE

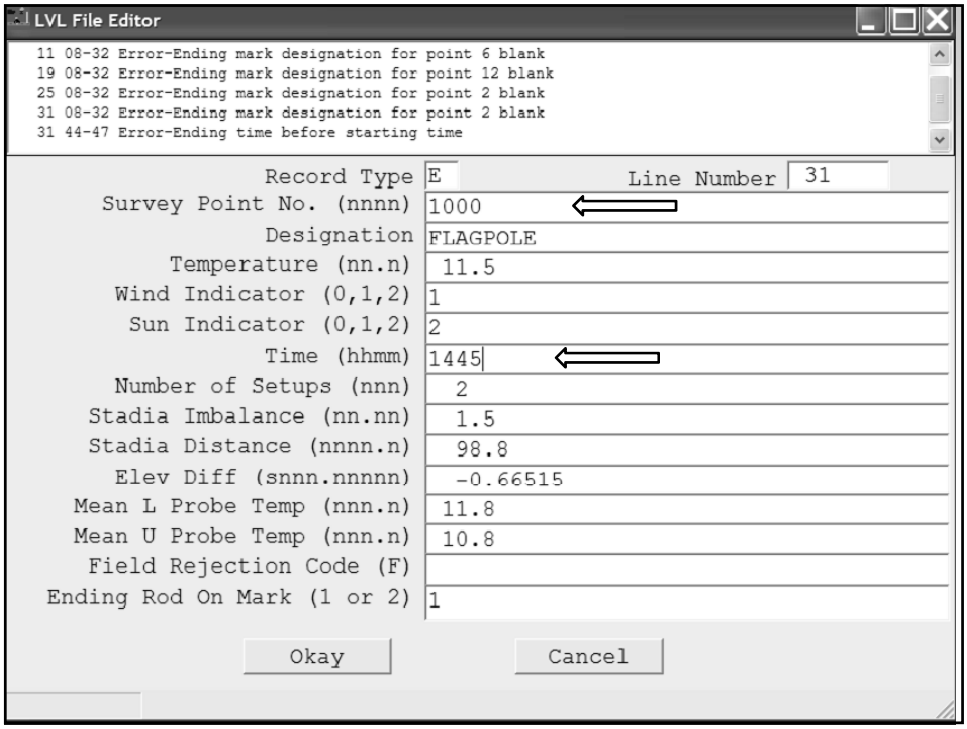


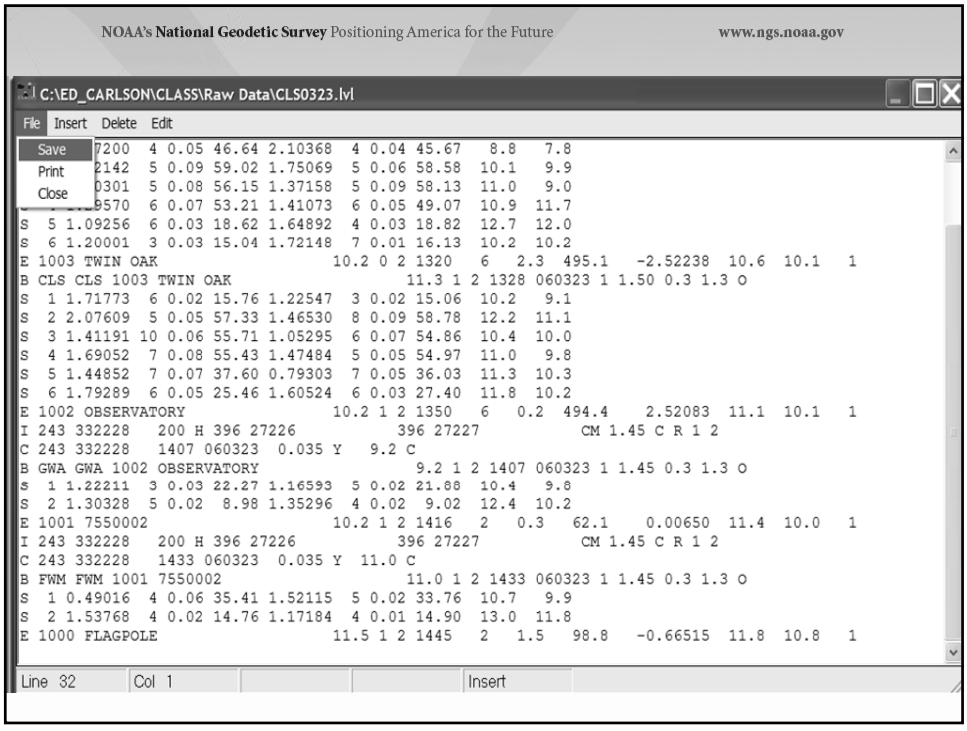
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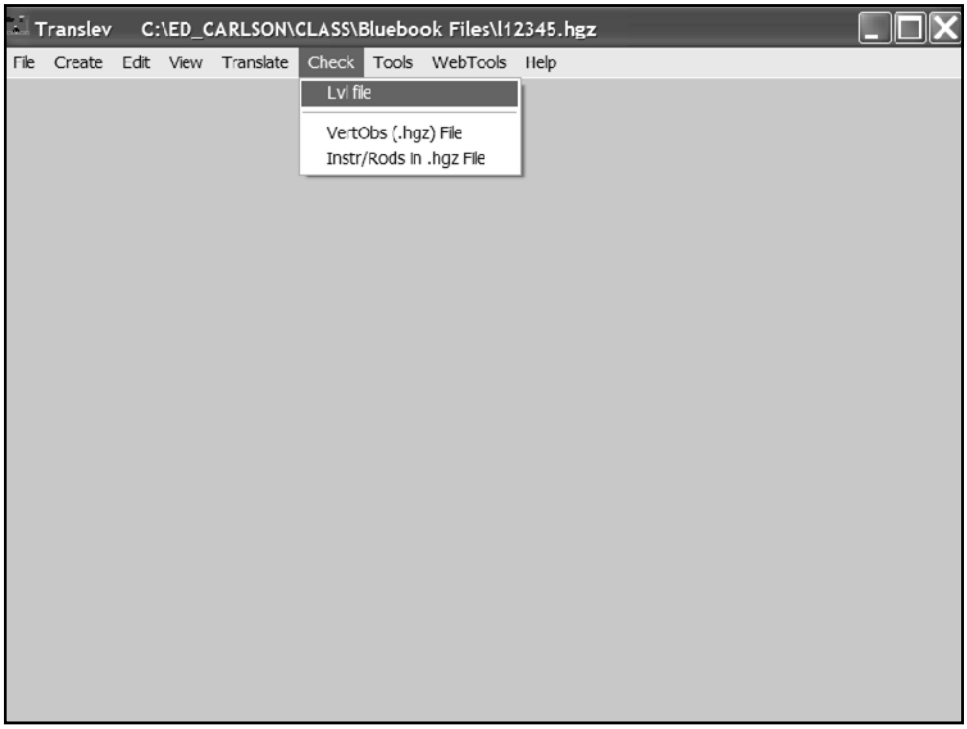
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 19 08-32 Error-Ending mark designation for point 12 blank
 25 08-32 Error-Ending mark designation for point 2 blank
 31 08-32 Error-Ending mark designation for point 2 blank
 31 44-47 Error-Ending time before starting time
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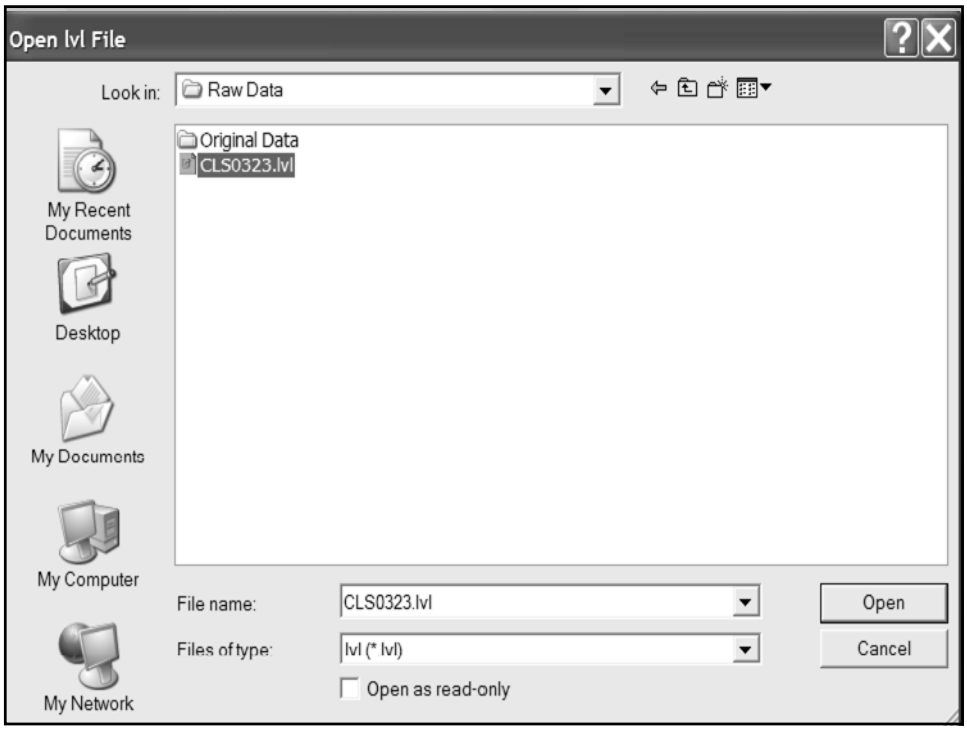
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Line Number	31
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Sun Indicator (0,1,2)	2
Time (hhmm)	1422
Number of Setups (nnn)	2
Stadia Imbalance (nn.nn)	1.5
Stadia Distance (nnnn.n)	98.8
Elev Diff (snnn.nnnnn)	-0.66515
Mean L Probe Temp (nnn.n)	11.8
Mean U Probe Temp (nnn.n)	10.8
Field Rejection Code (F)	
Ending Rod On Mark (1 or 2)	1

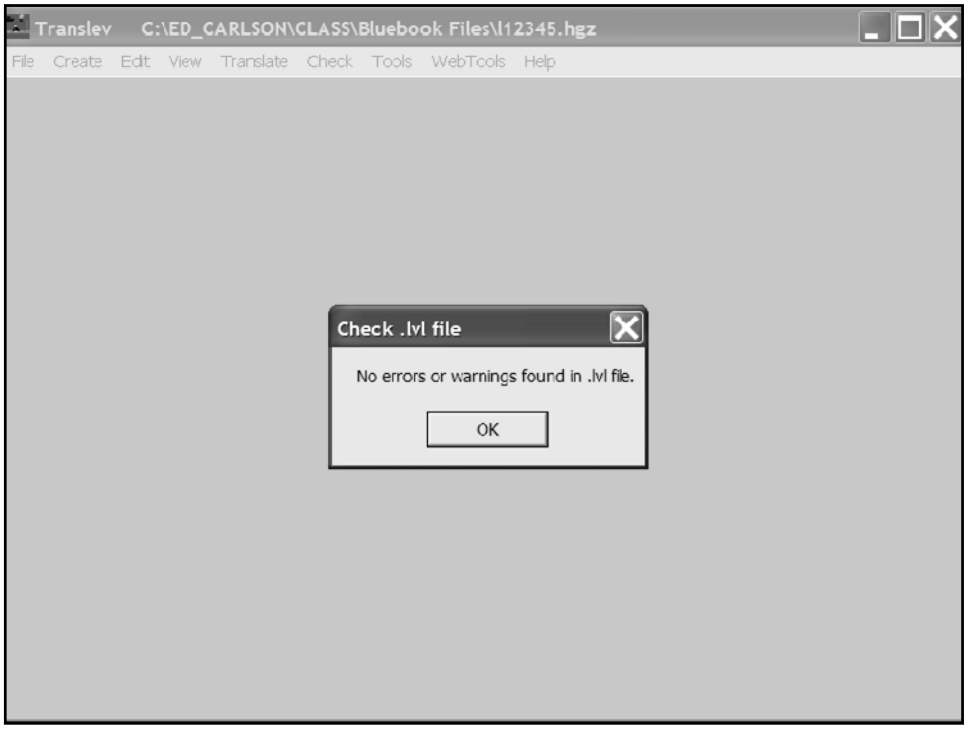
Okay Cancel

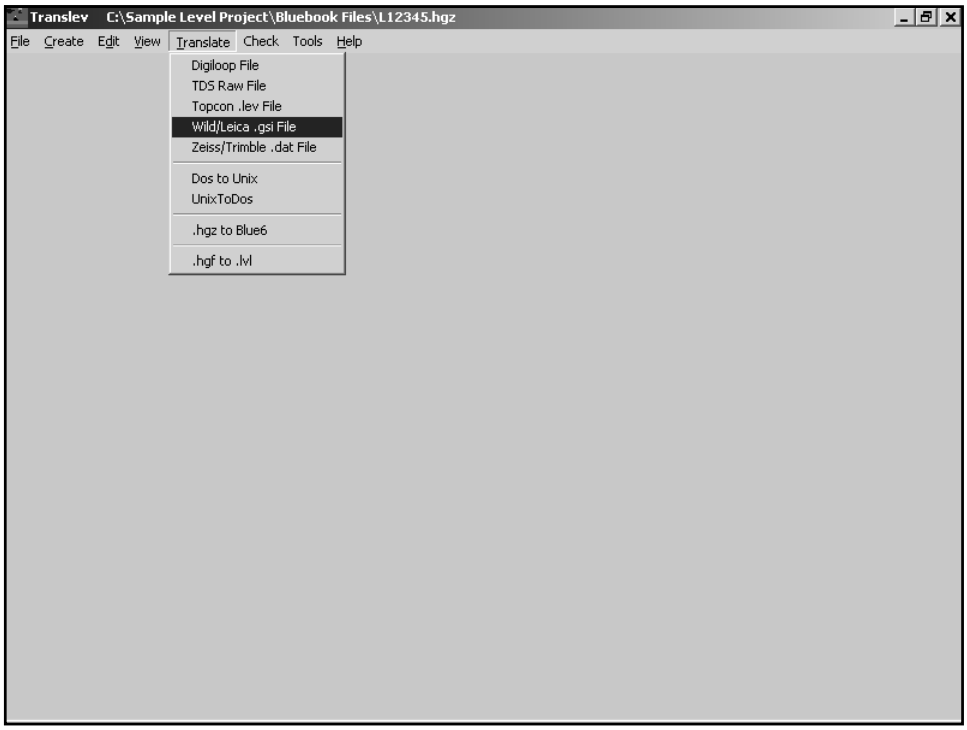

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19 08-32 Error-Ending mark designation for point 12 blank
25 08-32 Error-Ending mark designation for point 2 blank
31 08-32 Error-Ending mark designation for point 2 blank
31 44-47 Error-Ending time before starting time
Record Type E
Line Number 31
Survey Point No. (nnnn) 1000
Designation FLAGPOLE
Temperature (nn.n) 11.5
Wind Indicator (0,1,2) 1
Sun Indicator (0,1,2) 2
Time (hhmm) 1445
Number of Setups (nnn) 2
Stadia Imbalance (nn.nn) 1.5
Stadia Distance (nnnn.n) 98.8
Elev Diff (snnn.nnnnn) -0.66515
Mean L Probe Temp (nnn.n) 11.8
Mean U Probe Temp (nnn.n) 10.8
Field Rejection Code (F)
Ending Rod On Mark (1 or 2) 1
Okay
Cancel

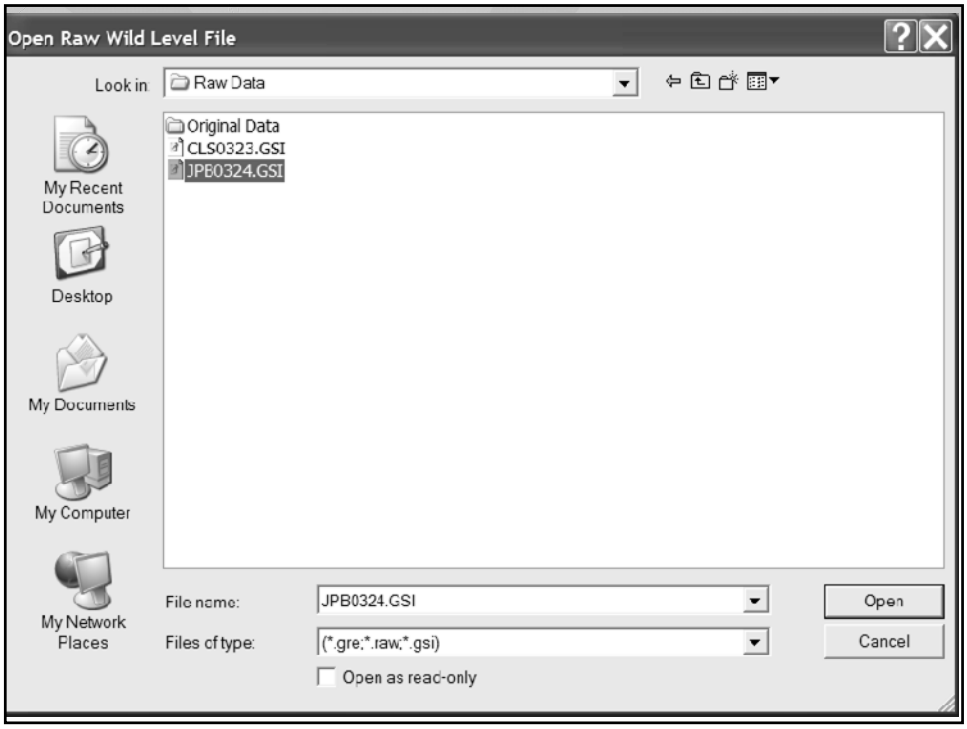

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www.ngs.noaa.gov
C:\ED_CARLSON\CLASS\Raw Data\CLS0323.lvl
File Insert Delete Edit
Save
Print
Close
7200 4 0.05 46.64 2.10368 4 0.04 45.67 8.8 7.8
2142 5 0.09 59.02 1.75069 5 0.06 58.58 10.1 9.9
0301 5 0.08 56.15 1.37158 5 0.09 58.13 11.0 9.0
9570 6 0.07 53.21 1.41073 6 0.05 49.07 10.9 11.7
S 5 1.09256 6 0.03 18.62 1.64892 4 0.03 18.82 12.7 12.0
S 6 1.20001 3 0.03 15.04 1.72148 7 0.01 16.13 10.2 10.2
E 1003 TWIN OAK 10.2 0 2 1320 6 2.3 495.1 -2.52238 10.6 10.1 1
B CLS CLS 1003 TWIN OAK 11.3 1 2 1328 060323 1 1.50 0.3 1.3 O
S 1 1.71773 6 0.02 15.76 1.22547 3 0.02 15.06 10.2 9.1
S 2 2.07609 5 0.05 57.33 1.46530 8 0.09 58.78 12.2 11.1
S 3 1.41191 10 0.06 55.71 1.05295 6 0.07 54.86 10.4 10.0
S 4 1.69052 7 0.08 55.43 1.47484 5 0.05 54.97 11.0 9.8
S 5 1.44852 7 0.07 37.60 0.79303 7 0.05 36.03 11.3 10.3
S 6 1.79289 6 0.05 25.46 1.60524 6 0.03 27.40 11.8 10.2
E 1002 OBSERVATORY 10.2 1 2 1350 6 0.2 494.4 2.52083 11.1 10.1 1
I 243 332228 200 H 396 27226 396 27227 CM 1.45 C R 1 2
C 243 332228 1407 060323 0.035 Y 9.2 C
B GWA GWA 1002 OBSERVATORY 9.2 1 2 1407 060323 1 1.45 0.3 1.3 O
S 1 1.22211 3 0.03 22.27 1.16593 5 0.02 21.88 10.4 9.8
S 2 1.30328 5 0.02 8.98 1.35296 4 0.02 9.02 12.4 10.2
E 1001 7550002 10.2 1 2 1416 2 0.3 62.1 0.00650 11.4 10.0 1
I 243 332228 200 H 396 27226 396 27227 CM 1.45 C R 1 2
C 243 332228 1433 060323 0.035 Y 11.0 C
B FWM FWM 1001 7550002 11.0 1 2 1433 060323 1 1.45 0.3 1.3 O
S 1 0.49016 4 0.06 35.41 1.52115 5 0.02 33.76 10.7 9.9
S 2 1.53768 4 0.02 14.76 1.17184 4 0.01 14.90 13.0 11.8
E 1000 FLAGPOLE 11.5 1 2 1445 2 1.5 98.8 -0.66515 11.8 10.8 1
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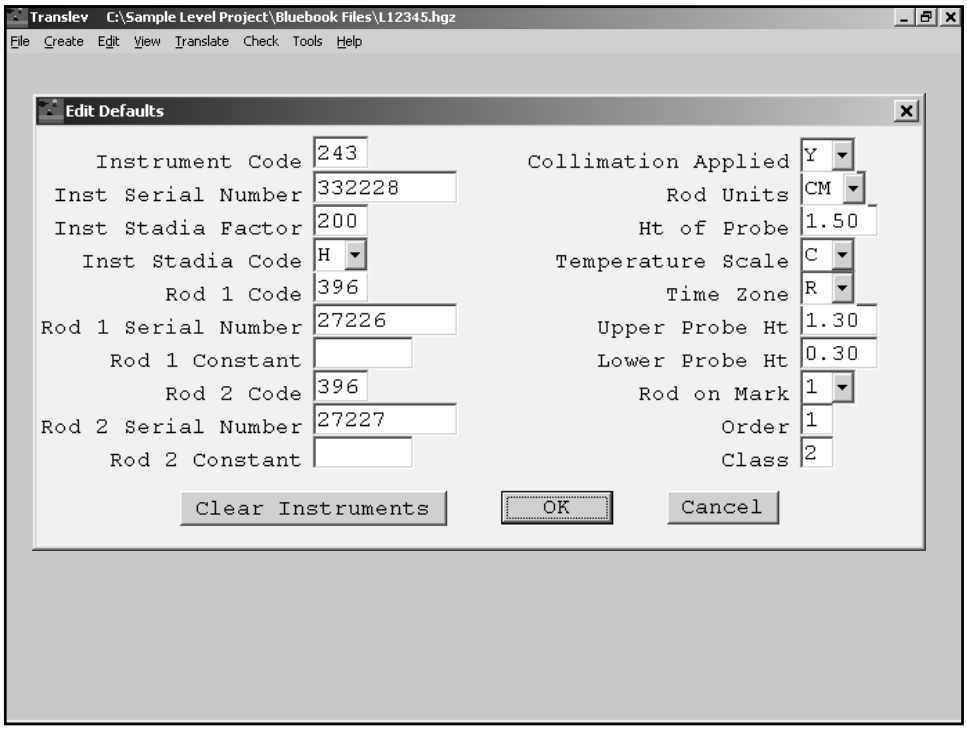

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File Create Edit View Translate Check Tools WebTools Help
Lvl file
VertObs (.hgz) File
Instr/Rods in .hgz File

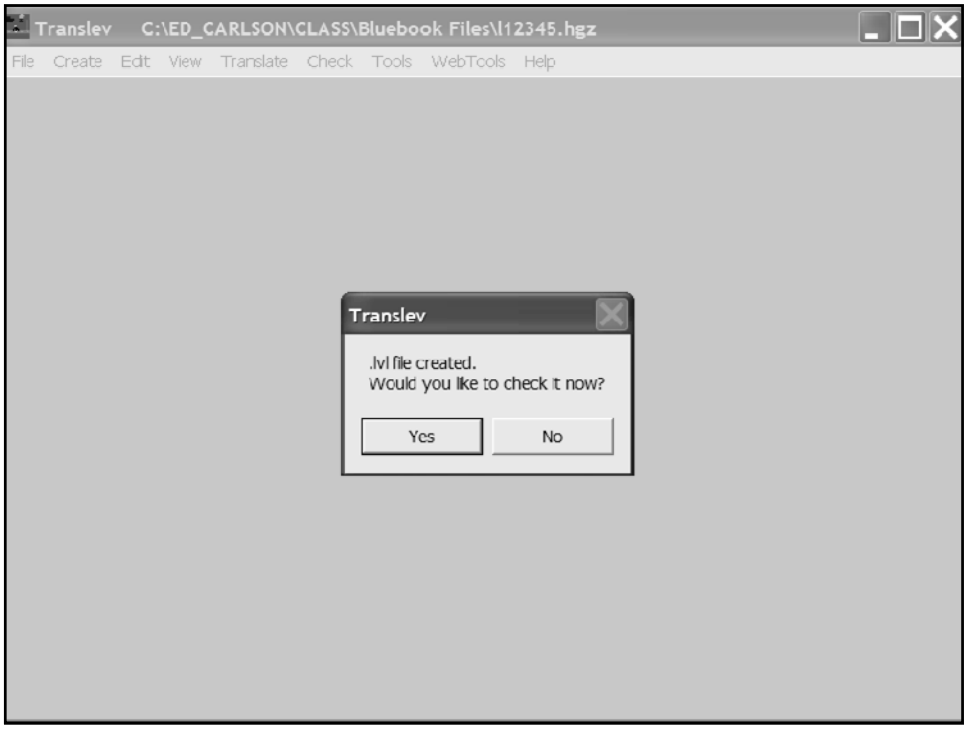

Open lvl File
Look in: Raw Data
Original Data
CLS0323.lvl
My Recent Documents
Desktop
My Documents
My Computer
My Network
File name: CLS0323.lvl
Files of type: lvl (* lvl)
Open as read-only
Open
Cancel

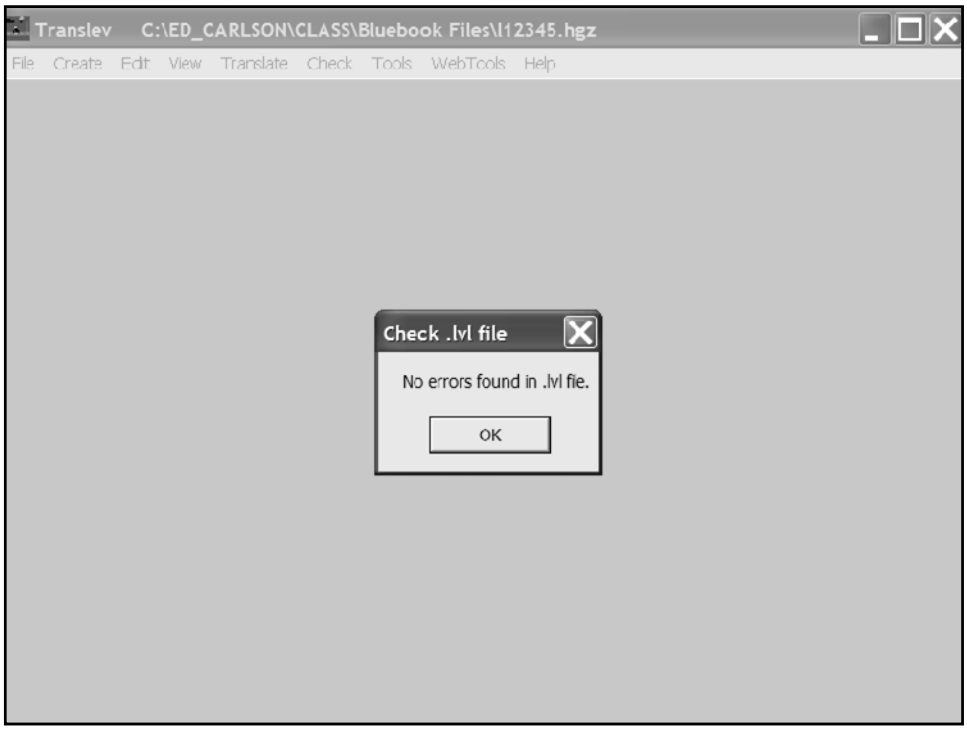

Transiev C:\ED_CARLSON\CLASS\Bluebook Files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Check .lvl file
No errors or warnings found in .lvl file.
OK


Transiev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Digiloop File
TDS Raw File
Topcon .lev File
Wild/Leica .gsi File
Zeiss/Trimble .dat File
Dos to Unix
UnixToDos
.hgz to Blue6
.hgf to .lvl


Open Raw Wild Level File
Look in:
Raw Data
Original Data
CLS0323.GSI
JPB0324.GSI
My Recent Documents
Desktop
My Documents
My Computer
My Network Places
File name:
JPB0324.GSI
Files of type:
(*.gre;*.raw;*.gsi)
Open as read-only
Open
Cancel

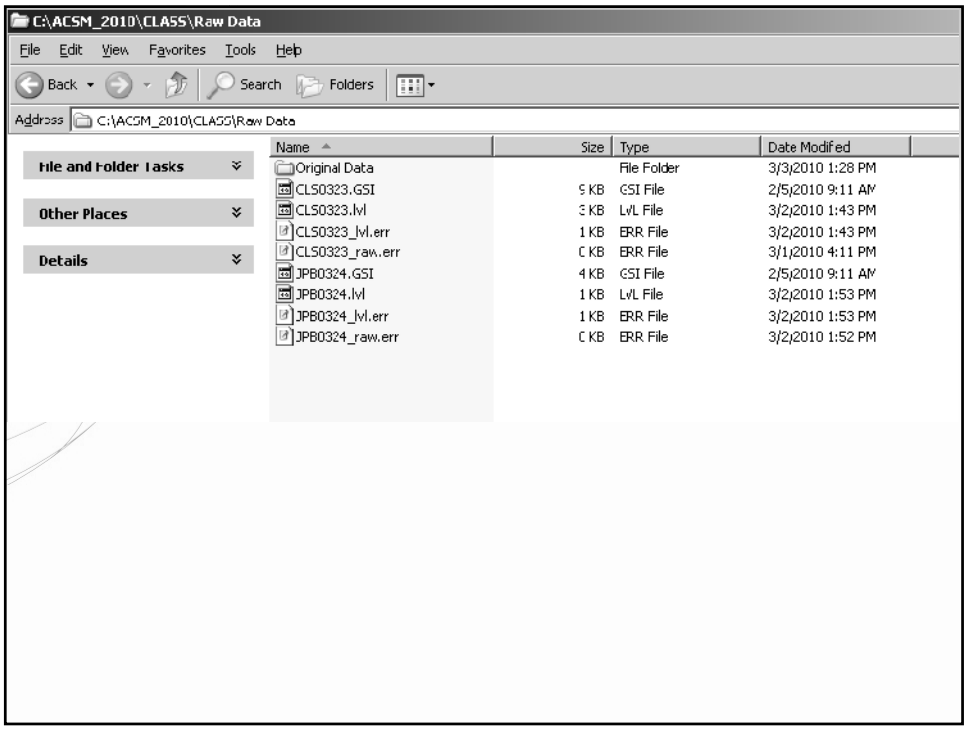

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Edit Defaults
Instrument Code 243
Inst Serial Number 332228
Inst Stadia Factor 200
Inst Stadia Code H
Rod 1 Code 396
Rod 1 Serial Number 27226
Rod 1 Constant
Rod 2 Code 396
Rod 2 Serial Number 27227
Rod 2 Constant
Collimation Applied Y
Rod Units CM
Ht of Probe 1.50
Temperature Scale C
Time Zone R
Upper Probe Ht 1.30
Lower Probe Ht 0.30
Rod on Mark 1
Order 1
Class 2
Clear Instruments
OK
Cancel

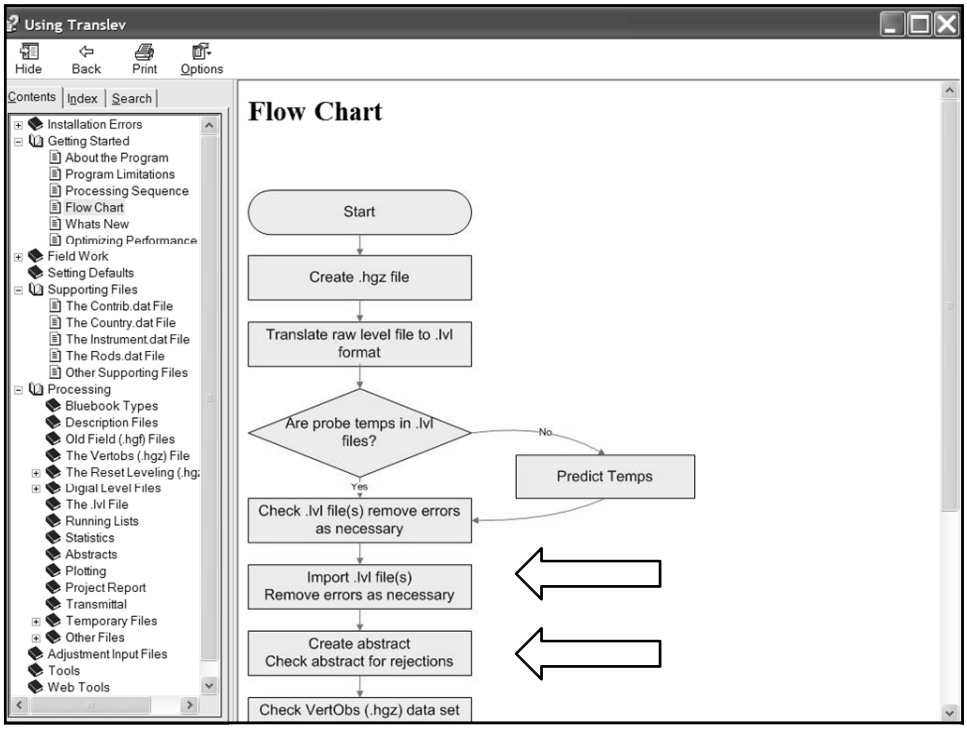

Translev C:\ED_CARLSON\CLASS\Bluebook Files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Translev
.lvl file created.
Would you like to check it now?
Yes
No


Translev C:\ED_CARLSON\CLASS\Bluebook Files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Check .lvl file
No errors found in .lvl file.
OK

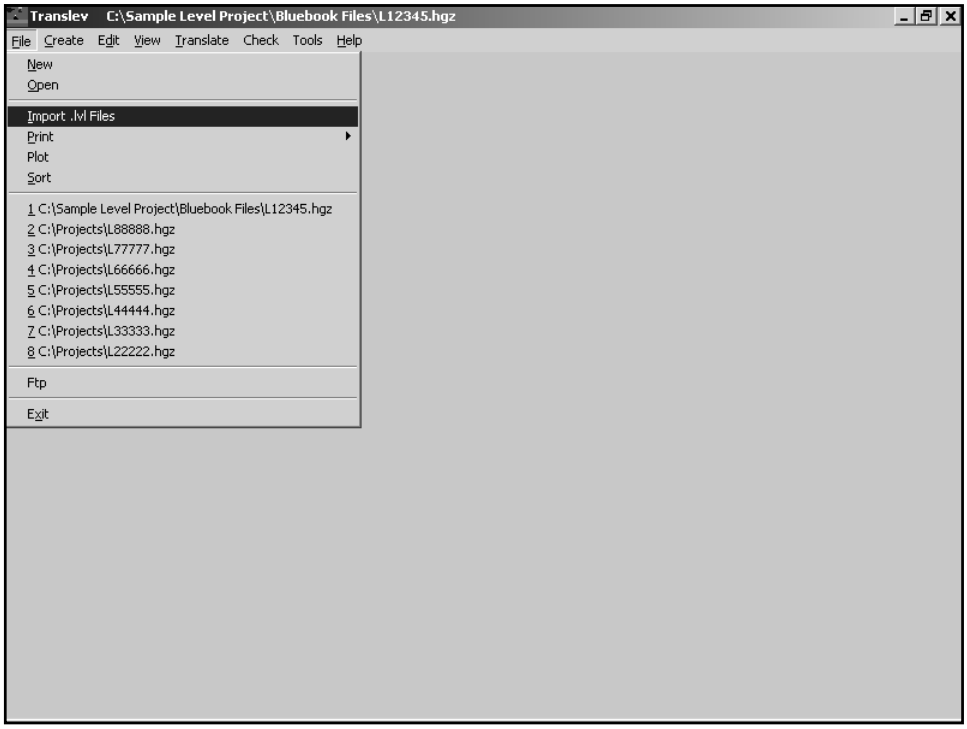
Translated File - CLS0323.lvl

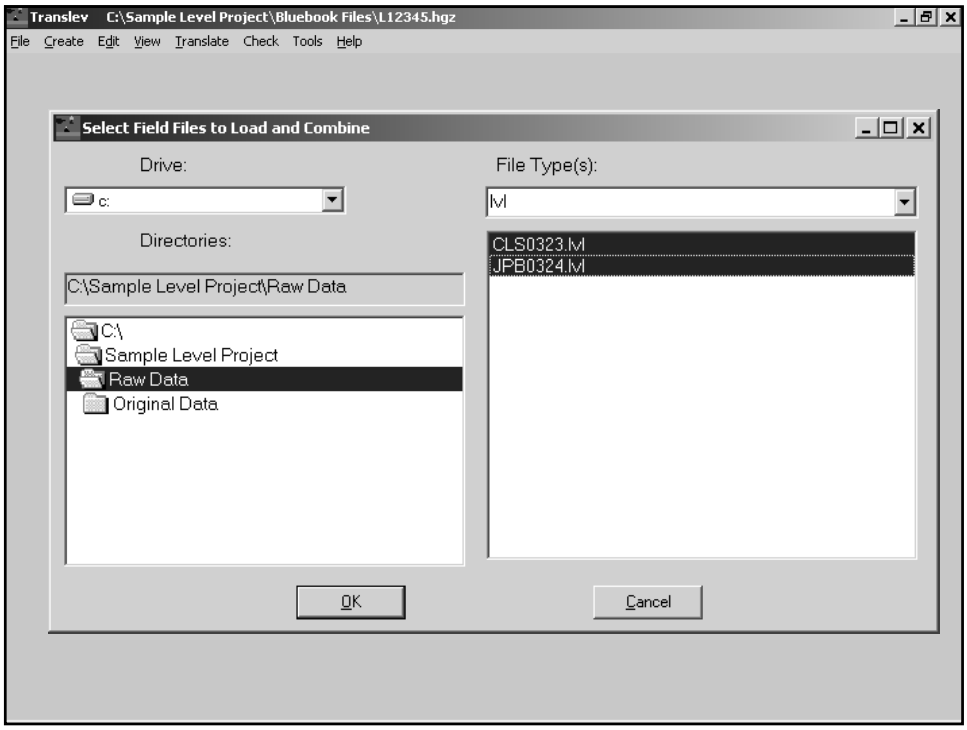
```
P L12345   CORBIN, VIRGINA LEVEL TIES, 2006
I 243 332228   200 H 396 27226          396 27227          CM 1.50 C R 1 2
C 243 332228   1253 060323  0.035 Y   9.0 C
B CLS CLS 1002 OBSERVATORY                9.0 0 2 1253 060323 1 1.50 0.3 1.3 O
S  1 1.27200  4 0.05 46.64 2.10368  4 0.04 45.67   8.8   7.8
S  2 1.32142  5 0.09 59.02 1.75069  5 0.06 58.58  10.1   9.9
S  3 1.30301  5 0.08 56.15 1.37158  5 0.09 58.13  11.0   9.0
S  4 1.29570  6 0.07 53.21 1.41073  6 0.05 49.07  10.9  11.7
S  5 1.09256  6 0.03 18.62 1.64892  4 0.03 18.82  12.7  12.0
S  6 1.20001  3 0.03 15.04 1.72148  7 0.01 16.13  10.2  10.2
E 1003 TWIN OAK                  10.2 0 2 1320   6   2.3  495.1   -2.52238  10.6  10.1   1
B CLS CLS 1003 TWIN OAK               11.3 1 2 1328 060323 1 1.50 0.3 1.3 O
S  1 1.71773  6 0.02 15.76 1.22547  3 0.02 15.06  10.2   9.1
S  2 2.07609  5 0.05 57.33 1.46530  8 0.09 58.78  12.2  11.1
S  3 1.41191 10 0.06 55.71 1.05295  6 0.07 54.86  10.4  10.0
S  4 1.69052  7 0.08 55.43 1.47484  5 0.05 54.97  11.0   9.8
S  5 1.44852  7 0.07 37.60 0.79303  7 0.05 36.03  11.3  10.3
S  6 1.79289  6 0.05 25.46 1.60524  6 0.03 27.40  11.8  10.2
E 1002 OBSERVATORY               10.2 1 2 1350   6   0.2  494.4    2.52083  11.1  10.1   1
I 243 332228   200 H 396 27226          396 27227          CM 1.45 C R 1 2
C 243 332228   1407 060323  0.035 Y   9.2 C
B GWA GWA 1002 OBSERVATORY                9.2 1 2 1407 060323 1 1.45 0.3 1.3 O
S  1 1.22211  3 0.03 22.27 1.16593  5 0.02 21.88  10.4   9.8
S  2 1.30328  5 0.02  8.98 1.35296  4 0.02  9.02  12.4  10.2
E 1001 7550002                   10.2 1 2 1416   2   0.3   62.1    0.00650  11.4  10.0   1
I 243 332228   200 H 396 27226          396 27227          CM 1.45 C R 1 2
C 243 332228   1433 060323  0.035 Y  11.0 C
B FWM FWM 1001 7550002                11.0 1 2 1433 060323 1 1.45 0.3 1.3 O
S  1 0.49016  4 0.06 35.41 1.52115  5 0.02 33.76  10.7   9.9
S  2 1.53768  4 0.02 14.76 1.17184  4 0.01 14.90  13.0  11.8
E 1000 FLAGPOLE                  11.5 1 2 1445   2   1.5   98.8   -0.66515  11.8  10.8   1
```



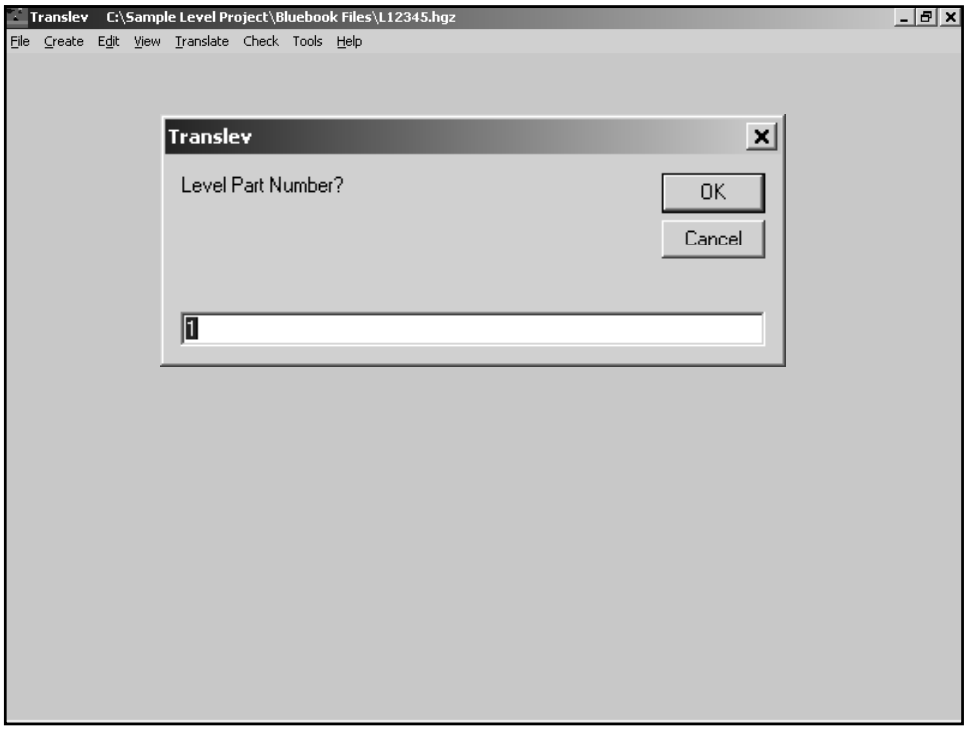

Using Translev
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Getting Started
About the Program
Program Limitations
Processing Sequence
Flow Chart
Whats New
Optimizing Performance
Field Work
Setting Defaults
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The Country.dat File
The Instrument.dat File
The Rods.dat File
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Temporary Files
Other Files
Adjustment Input Files
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Web Tools
Flow Chart
Start
Create .hgz file
Translate raw level file to .lvl format
Are probe temps in .lvl files?
No
Yes
Predict Temps
Check .lvl file(s) remove errors as necessary
Import .lvl file(s) Remove errors as necessary
Create abstract Check abstract for rejections
Check VertObs (.hgz) data set

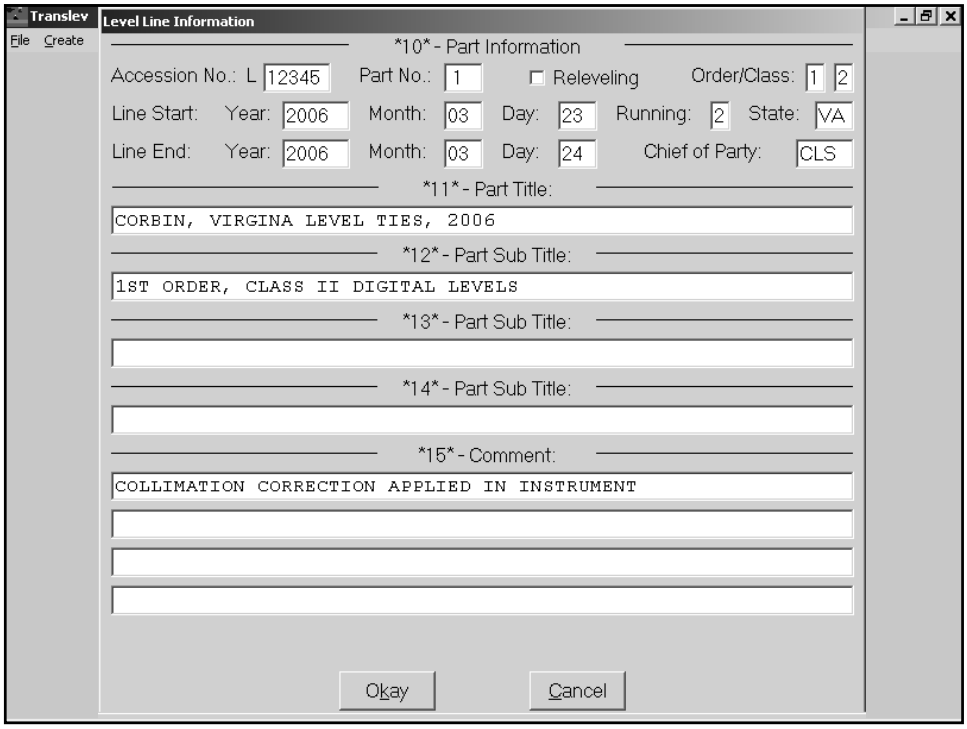

Translev
File
Create
Edit
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Translate
Check
Tools
Help
Click on "File"


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
New
Open
Import .lvl Files
Print
Plot
Sort
1 C:\Sample Level Project\Bluebook Files\L12345.hgz
2 C:\Projects\L88888.hgz
3 C:\Projects\L77777.hgz
4 C:\Projects\L66666.hgz
5 C:\Projects\L55555.hgz
6 C:\Projects\L44444.hgz
7 C:\Projects\L33333.hgz
8 C:\Projects\L22222.hgz
Ftp
Exit

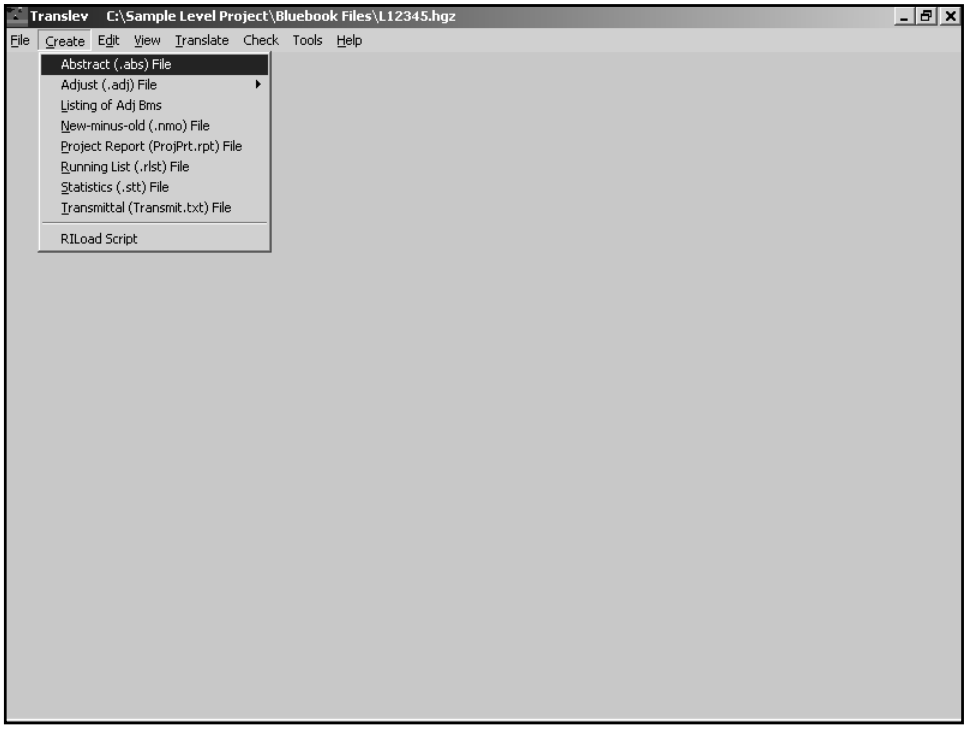

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Select Field Files to Load and Combine
Drive:
c:
File Type(s):
lvl
Directories:
C:\Sample Level Project\Raw Data
C:\
Sample Level Project
Raw Data
Original Data
CLS0323.lvl
JPB0324.lvl
OK
Cancel

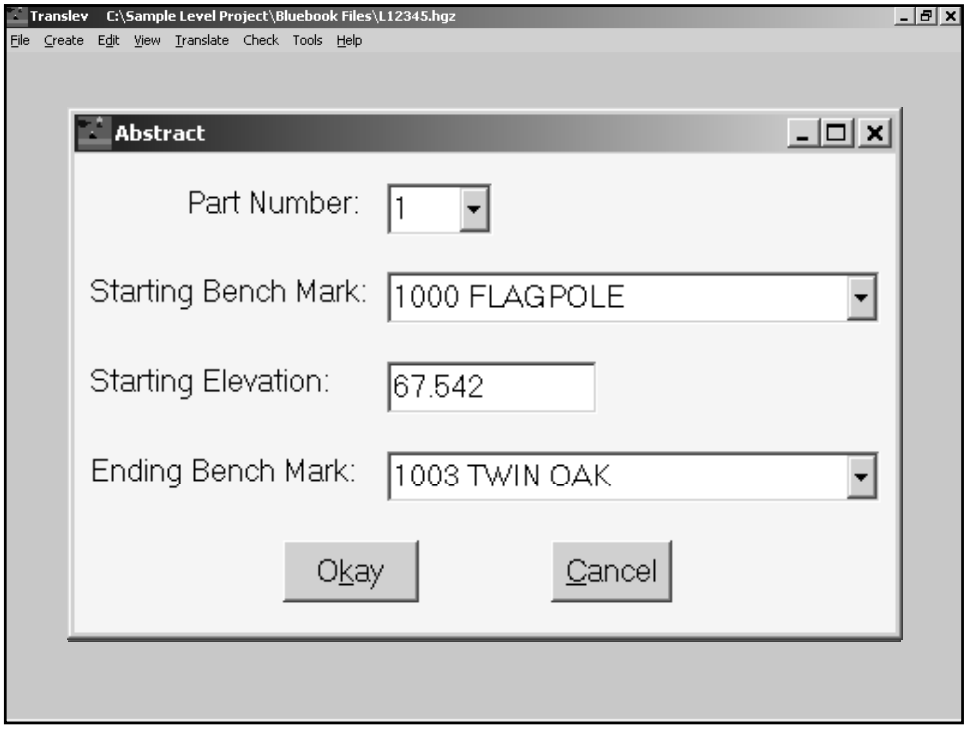

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Rod Corrections
NGS DOES NOT WANT ROD CORRECTIONS IN THE ABSTRACT OR THE *43* RECORDS.
Include rod corrections?
Yes
No


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Translev
Level Part Number?
OK
Cancel
1

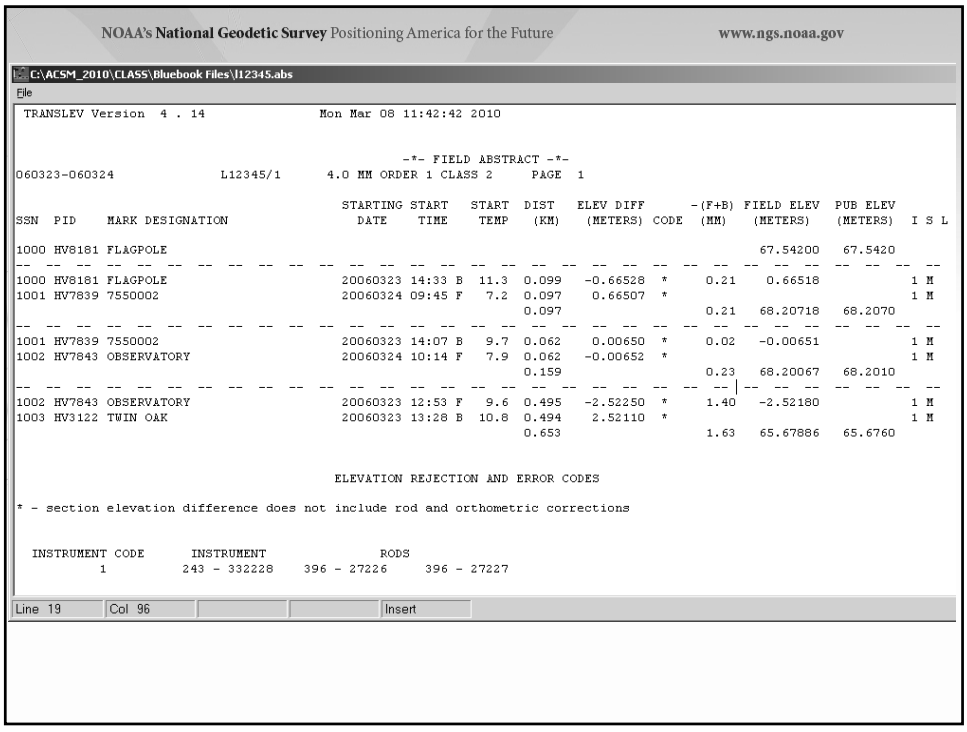

Translev
File Create
Level Line Information
10 - Part Information
Accession No.: L 12345
Part No.: 1
Releveling
Order/Class: 1 2
Line Start: Year: 2006 Month: 03 Day: 23 Running: 2 State: VA
Line End: Year: 2006 Month: 03 Day: 24 Chief of Party: CLS
11 - Part Title:
CORBIN, VIRGINA LEVEL TIES, 2006
12 - Part Sub Title:
1ST ORDER, CLASS II DIGITAL LEVELS
13 - Part Sub Title:
14 - Part Sub Title:
15 - Comment:
COLLIMATION CORRECTION APPLIED IN INSTRUMENT
Okay
Cancel


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Translev
Processing Complete!
OK


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Abstract (.abs) File
Adjust (.adj) File
Listing of Adj Bms
New-minus-old (.nmo) File
Project Report (ProjPrt.rpt) File
Running List (.rlst) File
Statistics (.stt) File
Transmittal (Transmit.txt) File
RILoad Script


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Abstract
Part Number:
1
Starting Bench Mark:
1000 FLAGPOLE
Starting Elevation:
67.542
Ending Bench Mark:
1003 TWIN OAK
Okay
Cancel


Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Rod Corrections
NGS DOES NOT WANT ROD CORRECTIONS IN THE ABSTRACT OR THE *43* RECORDS.
Include rod corrections?
Yes
No


NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
C:\ACSM_2010\CLASS\Bluebook Files\l12345.abs
File
TRANSLEV Version 4 . 14 Mon Mar 08 11:42:42 2010
-*- FIELD ABSTRACT -*-
060323-060324 L12345/1 4.0 MM ORDER 1 CLASS 2 PAGE 1
STARTING START START DIST ELEV DIFF -(F+B) FIELD ELEV PUB ELEV
SSN PID MARK DESIGNATION DATE TIME TEMP (KM) (METERS) CODE (MM) (METERS) (METERS) I S L
1000 HV8181 FLAGPOLE 67.54200 67.5420
1000 HV8181 FLAGPOLE 20060323 14:33 B 11.3 0.099 -0.66528 * 0.21 0.66518 1 M
1001 HV7839 7550002 20060324 09:45 F 7.2 0.097 0.66507 * 1 M
0.097 0.21 68.20718 68.2070
1001 HV7839 7550002 20060323 14:07 B 9.7 0.062 0.00650 * 0.02 -0.00651 1 M
1002 HV7843 OBSERVATORY 20060324 10:14 F 7.9 0.062 -0.00652 * 1 M
0.159 0.23 68.20067 68.2010
1002 HV7843 OBSERVATORY 20060323 12:53 F 9.6 0.495 -2.52250 * 1.40 -2.52180 1 M
1003 HV3122 TWIN OAK 20060323 13:28 B 10.8 0.494 2.52110 * 1 M
0.653 1.63 65.67886 65.6760
ELEVATION REJECTION AND ERROR CODES
* - section elevation difference does not include rod and orthometric corrections
INSTRUMENT CODE INSTRUMENT RODS
1 243 - 332228 396 - 27226 396 - 27227
Line 19 Col 96 Insert

NOAA's **National Geodetic Survey** Positioning America for the Future www.ngs.noaa.gov

C:\ACSM_2010\CLASS\Bluebook Files\l12345.abs

File

```
                                                                0.159                    0.23   68.20067   68.2010
--  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
1002 HV7843 OBSERVATORY                  20060323 12:53 F   9.6  0.495   -2.52250  *     1.40   -2.52180            1 M
1003 HV3122 TWIN OAK                     20060323 13:28 B  10.8  0.494    2.52110  *                               1 M
                                                                0.653                    1.63   65.67886   65.6760


                                        ELEVATION REJECTION AND ERROR CODES

* - section elevation difference does not include rod and orthometric corrections


  INSTRUMENT CODE      INSTRUMENT              RODS
            1          243 - 332228    396 - 27226     396 - 27227


                                           SEGMENT(S) & RUNNING ORDER

                                          --- Survey point numbers ---                                    length  S l

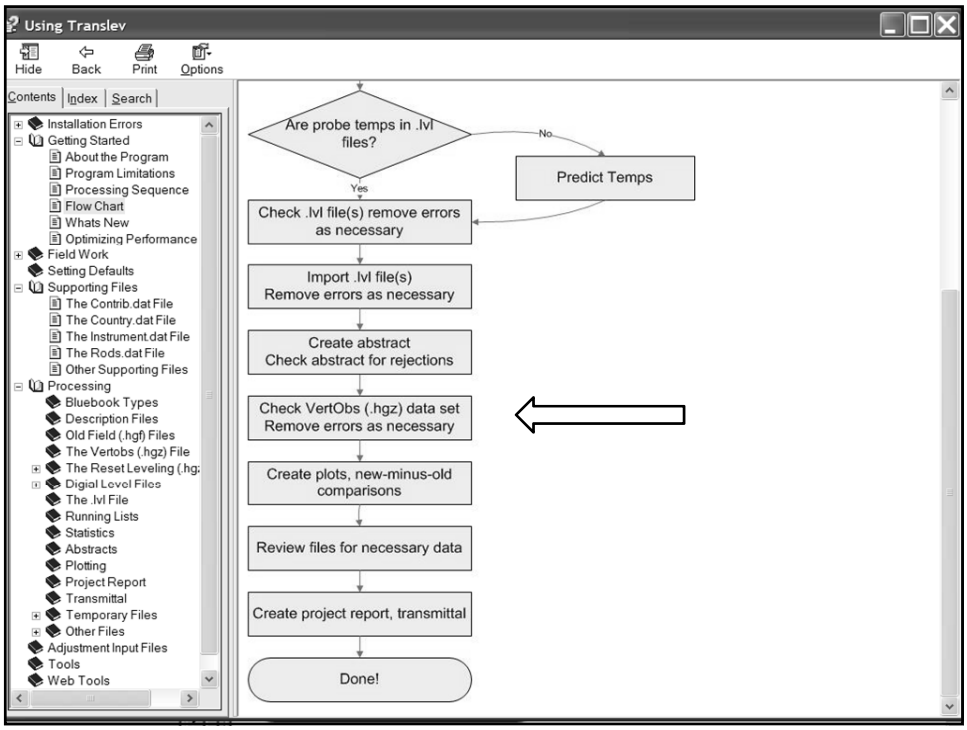
1000 1001 1002 1003                                                                                      0.653  M

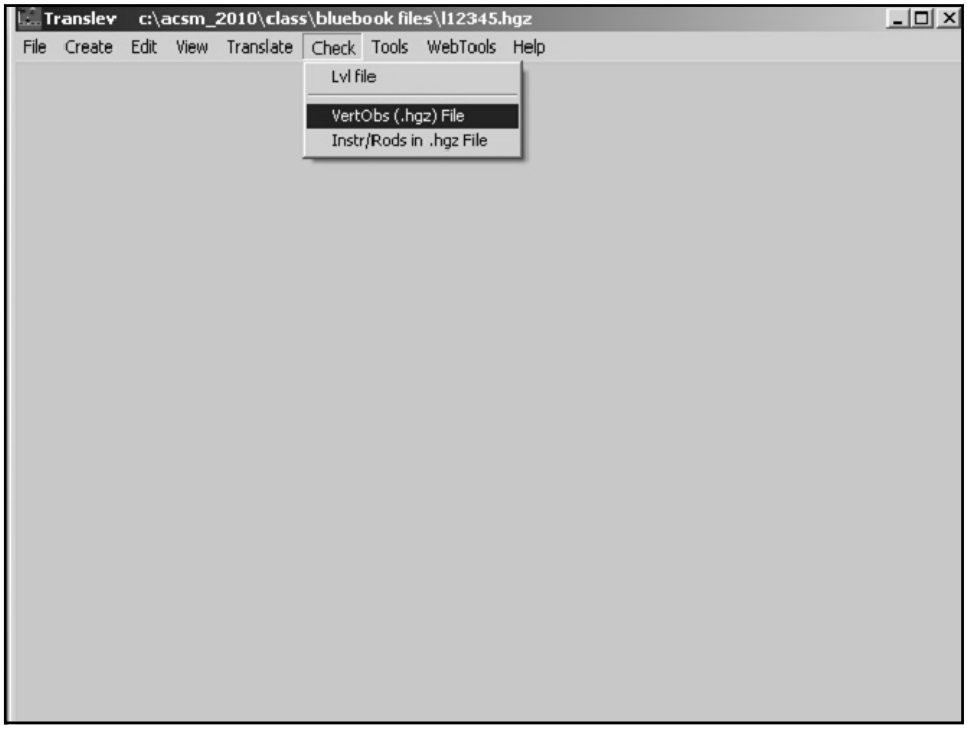

  FROM   TO        N. LATITUDE   W. LONGITUDE   FIELD DISTANCE VS. COMPUTED

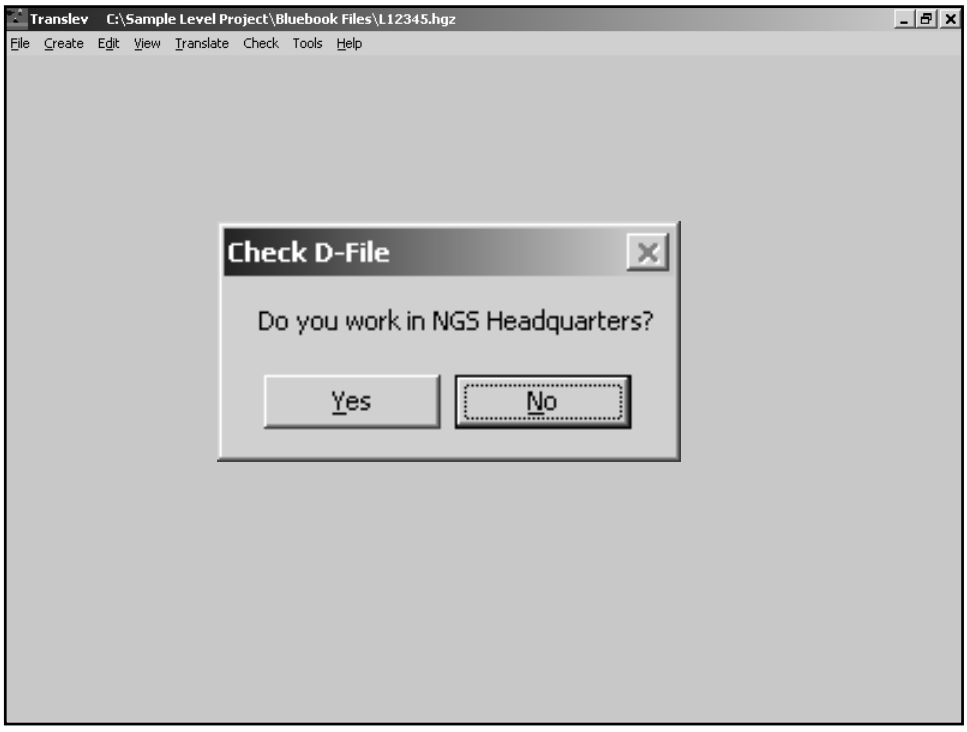
       1000           381205        0772224           0.00        0.00
  1000 1001           381204        0772224           0.10        0.03
  1001 1002           381207        0772222           0.06        0.10
  1002 1003           381206        0772203           0.49        0.46

* - Observed vs. computed difference exceeds 200 meters
```

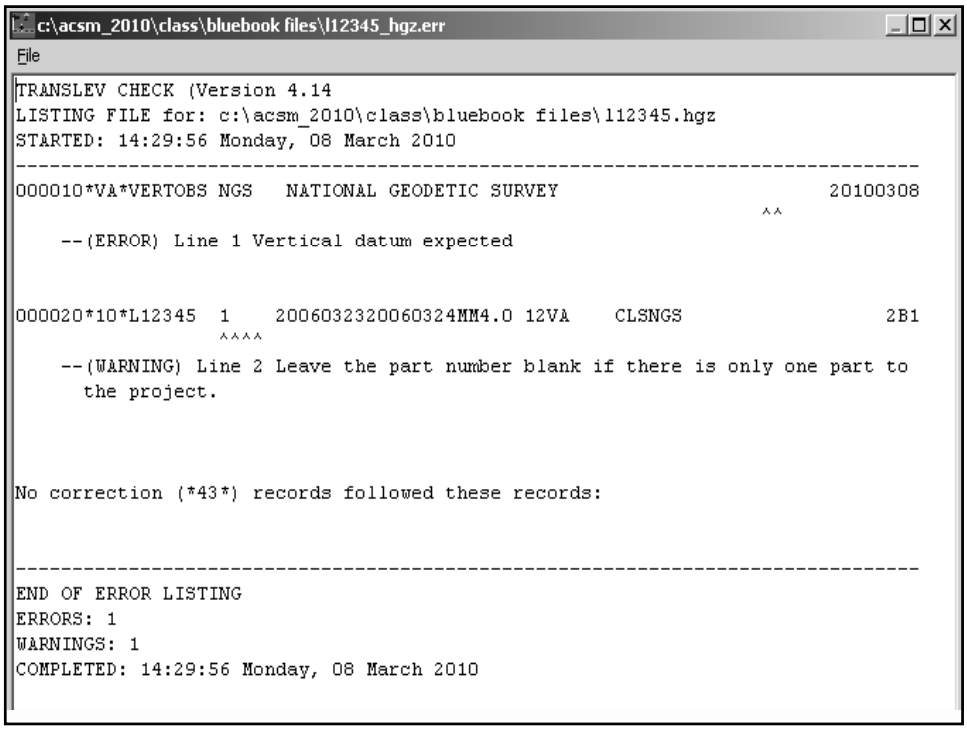
Line 19 | Col 96 | Insert

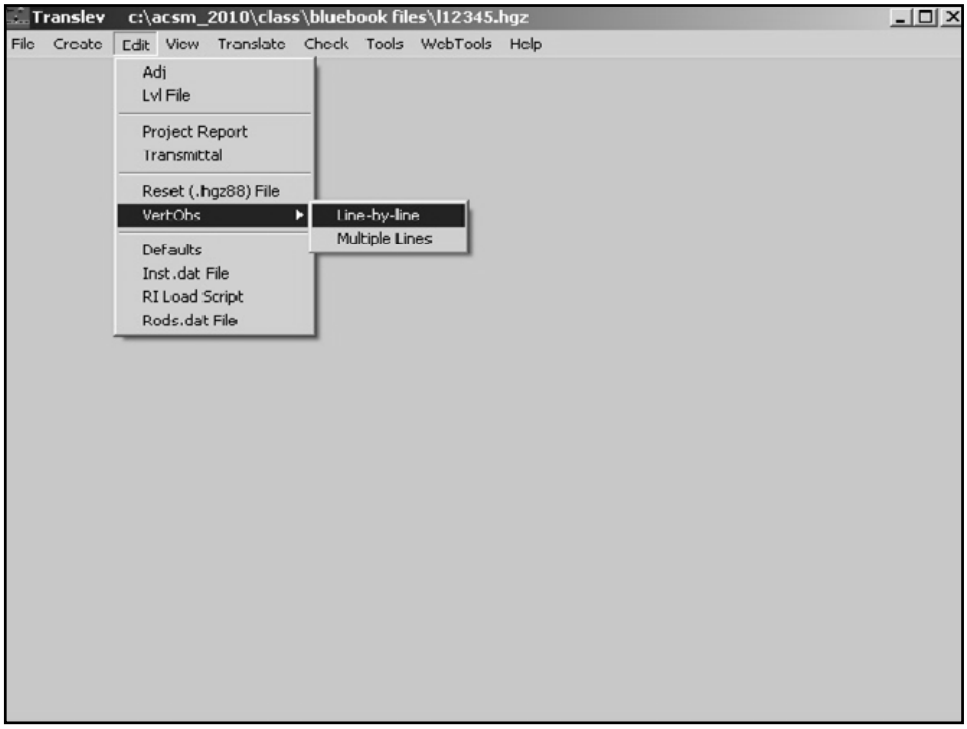


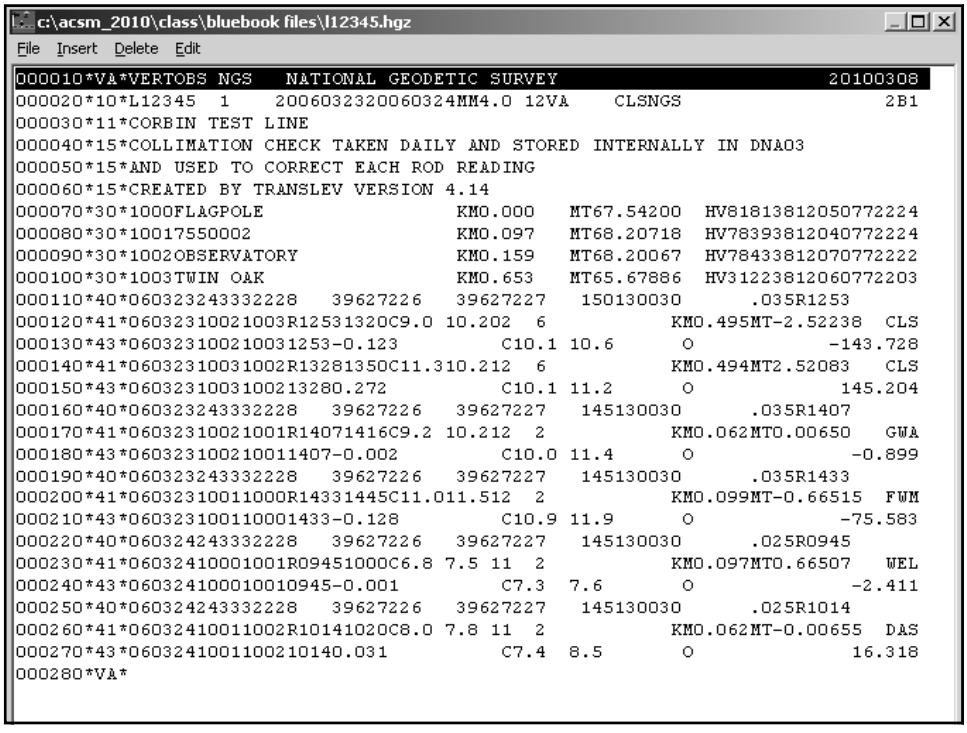

Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Lvl file
VertObs (.hgz) File
Instr/Rods in .hgz File

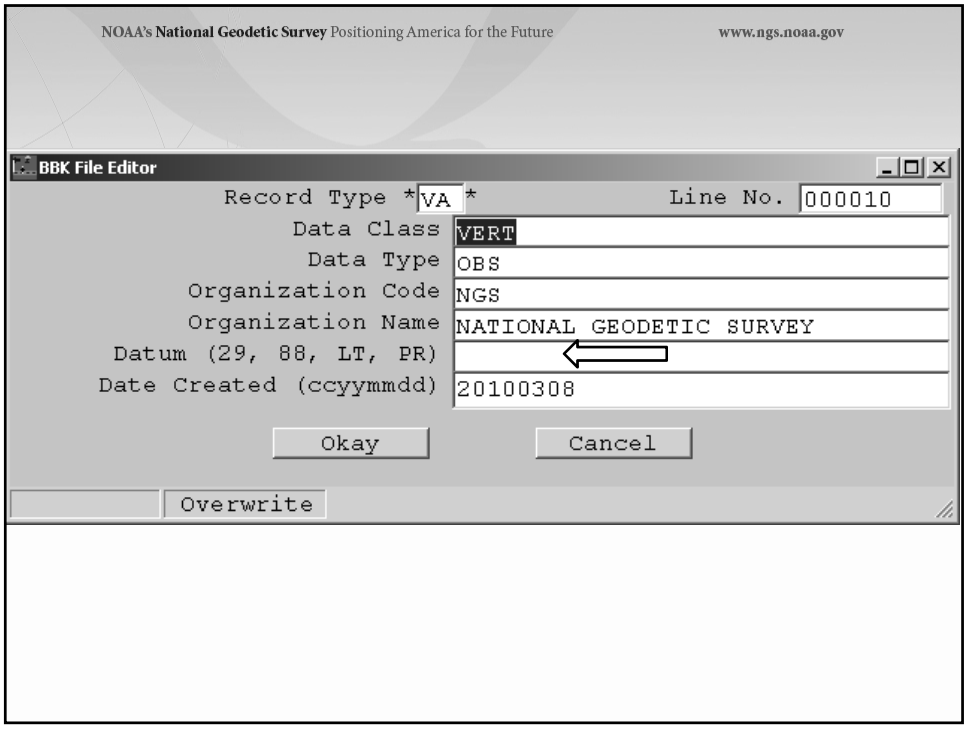

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Check D-File
Do you work in NGS Headquarters?
Yes
No

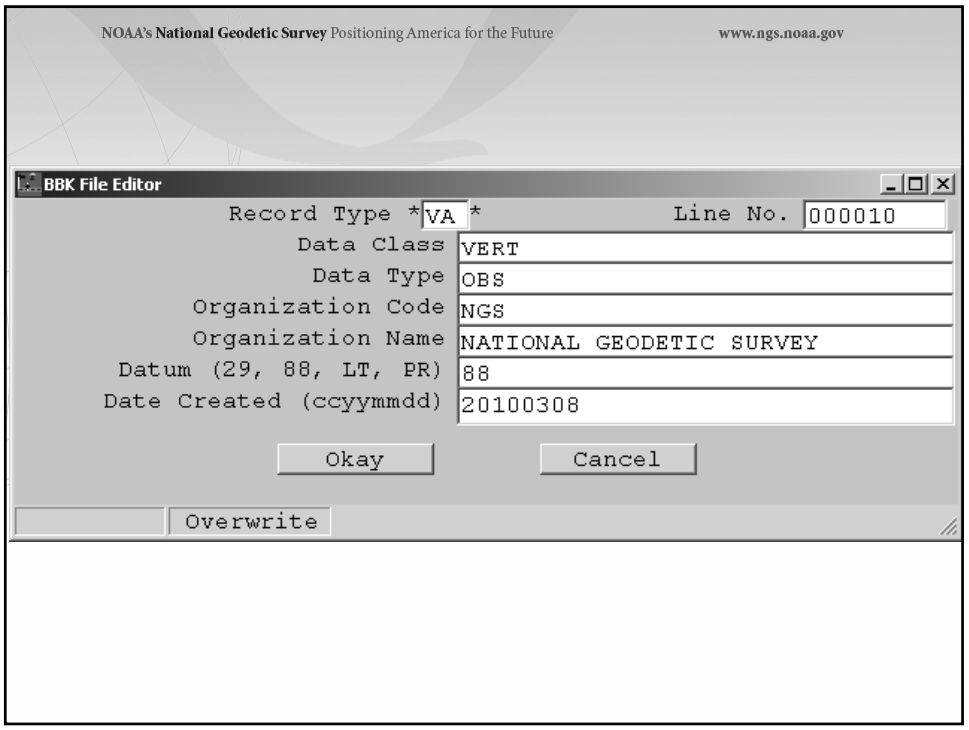

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Are Encountered In The Vertical Observation File (*.hgz)
Check .hgz File
File checking complete.
1 errors.
1 warnings.
OK

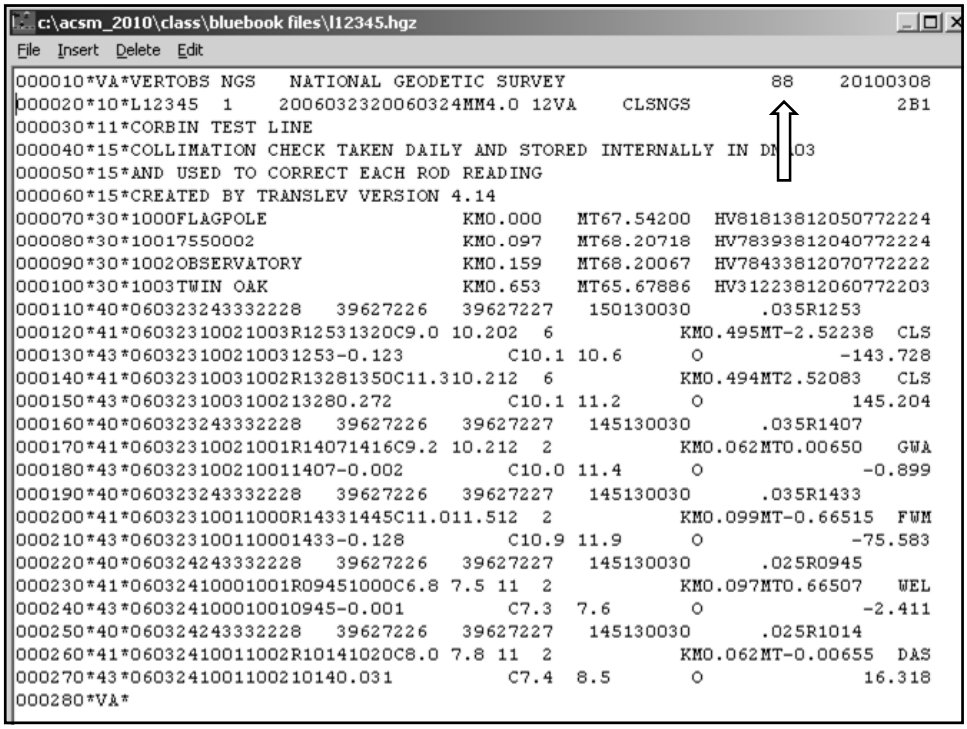

c:\acsm_2010\class\bluebook files\l12345_hgz.err
File
TRANSLEV CHECK (Version 4.14
LISTING FILE for: c:\acsm_2010\class\bluebook files\l12345.hgz
STARTED: 14:29:56 Monday, 08 March 2010
000010*VA*VERTOBS NGS NATIONAL GEODETIC SURVEY 20100308
--(ERROR) Line 1 Vertical datum expected
000020*10*L12345 1 20060323200603 24MM4.0 12VA CLSNGS 2B1
--(WARNING) Line 2 Leave the part number blank if there is only one part to the project.
No correction (*43*) records followed these records:
END OF ERROR LISTING
ERRORS: 1
WARNINGS: 1
COMPLETED: 14:29:56 Monday, 08 March 2010

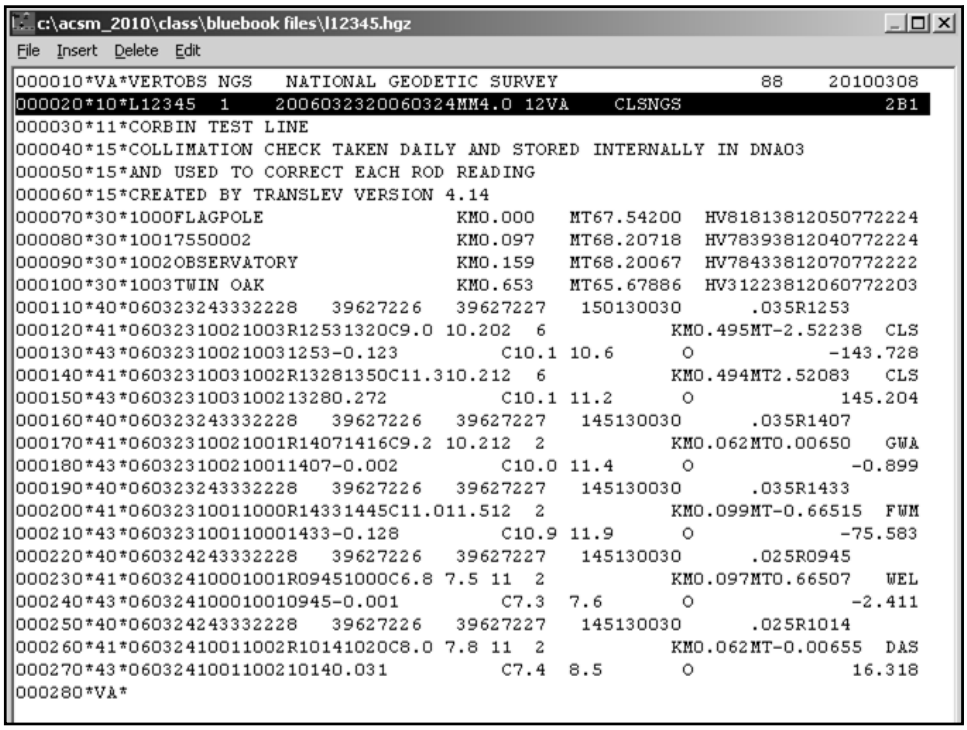

Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Adj
Lvl File
Project Report
Transmittal
Reset (.hgz88) File
VertObs
Defaults
Inst.dat File
RI Load Script
Rods.dat File
Line-by-line
Multiple Lines

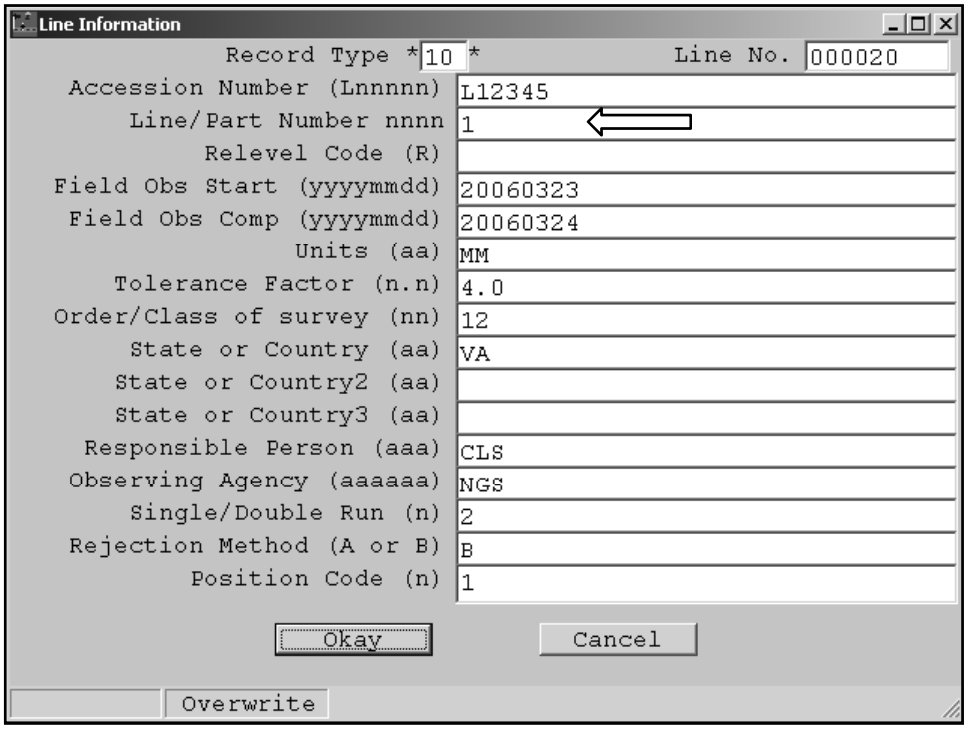

c:\acsm_2010\class\bluebook files\l12345.hgz
File Insert Delete Edit
000010*VA*VERTOBS NGS NATIONAL GEODETIC SURVEY 20100308
000020*10*L12345 1 2006032320060324MM4.0 12VA CLSNGS 2B1
000030*11*CORBIN TEST LINE
000040*15*COLLIMATION CHECK TAKEN DAILY AND STORED INTERNALLY IN DNA03
000050*15*AND USED TO CORRECT EACH ROD READING
000060*15*CREATED BY TRANSLEV VERSION 4.14
000070*30*1000FLAGPOLE KM0.000 MT67.54200 HV81813812050772224
000080*30*10017550002 KM0.097 MT68.20718 HV78393812040772224
000090*30*1002OBSERVATORY KM0.159 MT68.20067 HV78433812070772222
000100*30*1003TWIN OAK KM0.653 MT65.67886 HV31223812060772203
000110*40*060323243332228 39627226 39627227 150130030 .035R1253
000120*41*06032310021003R1253132OC9.0 10.202 6 KM0.495MT-2.52238 CLS
000130*43*060323100210031253-0.123 C10.1 10.6 O -143.728
000140*41*06032310031002R1328135OC11.310.212 6 KM0.494MT2.52083 CLS
000150*43*060323100310021328O.272 C10.1 11.2 O 145.204
000160*40*060323243332228 39627226 39627227 145130030 .035R1407
000170*41*06032310021001R14071416C9.2 10.212 2 KM0.062MT0.00650 GWA
000180*43*060323100210011407-0.002 C10.0 11.4 O -0.899
000190*40*060323243332228 39627226 39627227 145130030 .035R1433
000200*41*06032310011000R14331445C11.011.512 2 KM0.099MT-0.66515 FWM
000210*43*060323100110001433-0.128 C10.9 11.9 O -75.583
000220*40*060324243332228 39627226 39627227 145130030 .025R0945
000230*41*06032410001001R0945100OC6.8 7.5 11 2 KM0.097MT0.66507 WEL
000240*43*060324100010010945-0.001 C7.3 7.6 O -2.411
000250*40*060324243332228 39627226 39627227 145130030 .025R1014
000260*41*06032410011002R1014102OC8.0 7.8 11 2 KM0.062MT-0.00655 DAS
000270*43*060324100110021014O.031 C7.4 8.5 O 16.318
000280*VA*

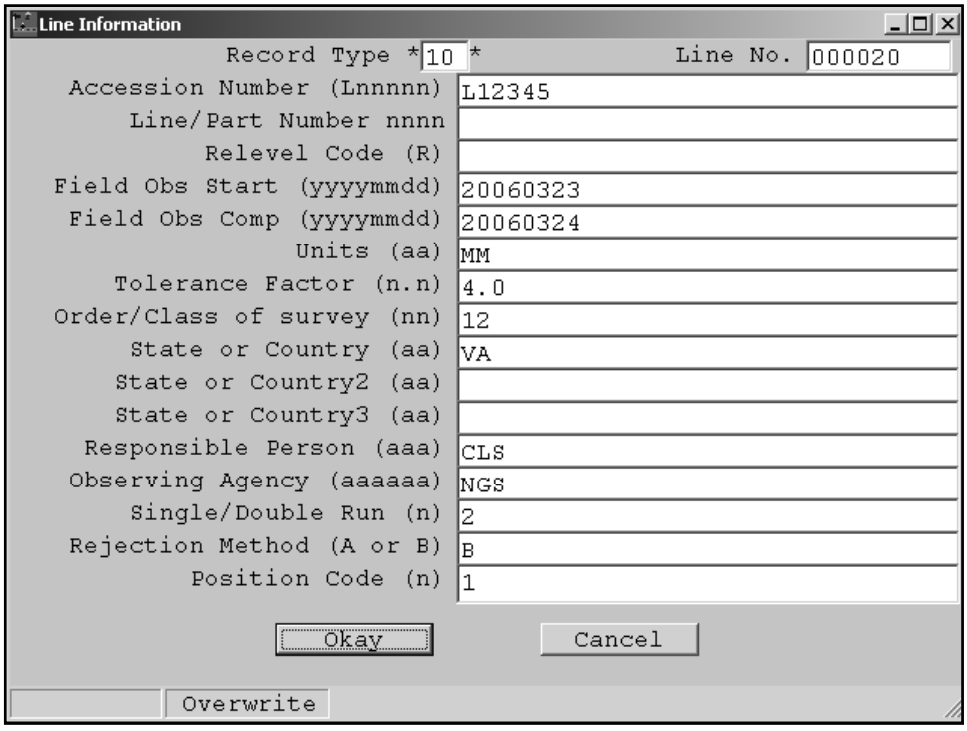

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
BBK File Editor
Record Type *VA*
Line No. 000010
Data Class VERT
Data Type OBS
Organization Code NGS
Organization Name NATIONAL GEODETIC SURVEY
Datum (29, 88, LT, PR)
Date Created (ccyymmdd) 20100308
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Cancel
Overwrite

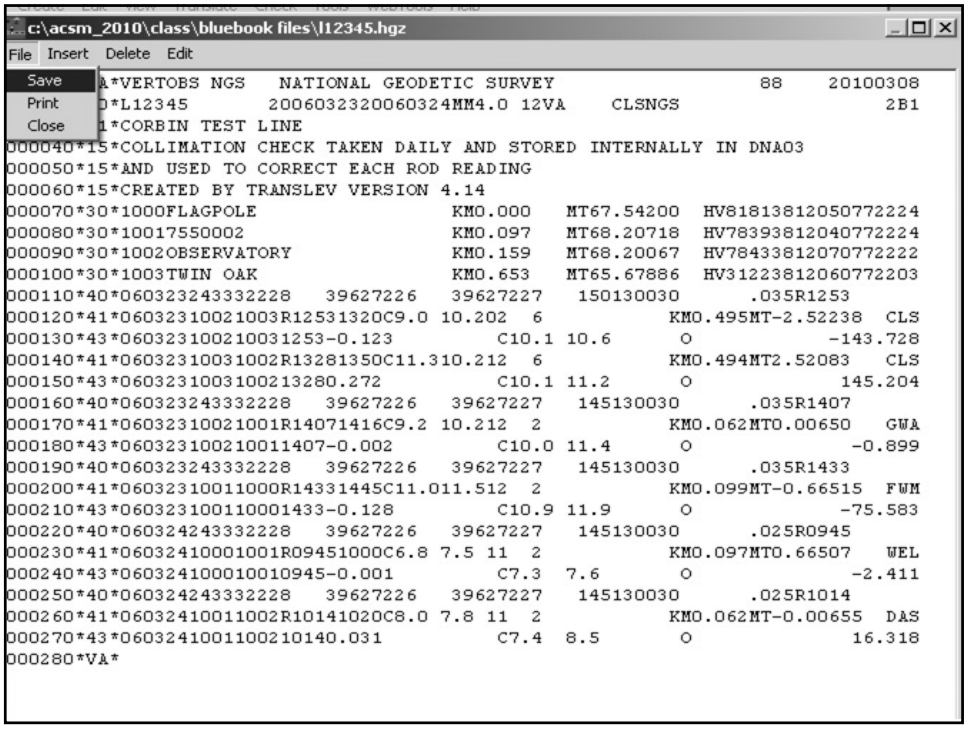

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
BBK File Editor
Record Type *VA*
Line No. 000010
Data Class VERT
Data Type OBS
Organization Code NGS
Organization Name NATIONAL GEODETIC SURVEY
Datum (29, 88, LT, PR) 88
Date Created (ccyymmdd) 20100308
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Cancel
Overwrite

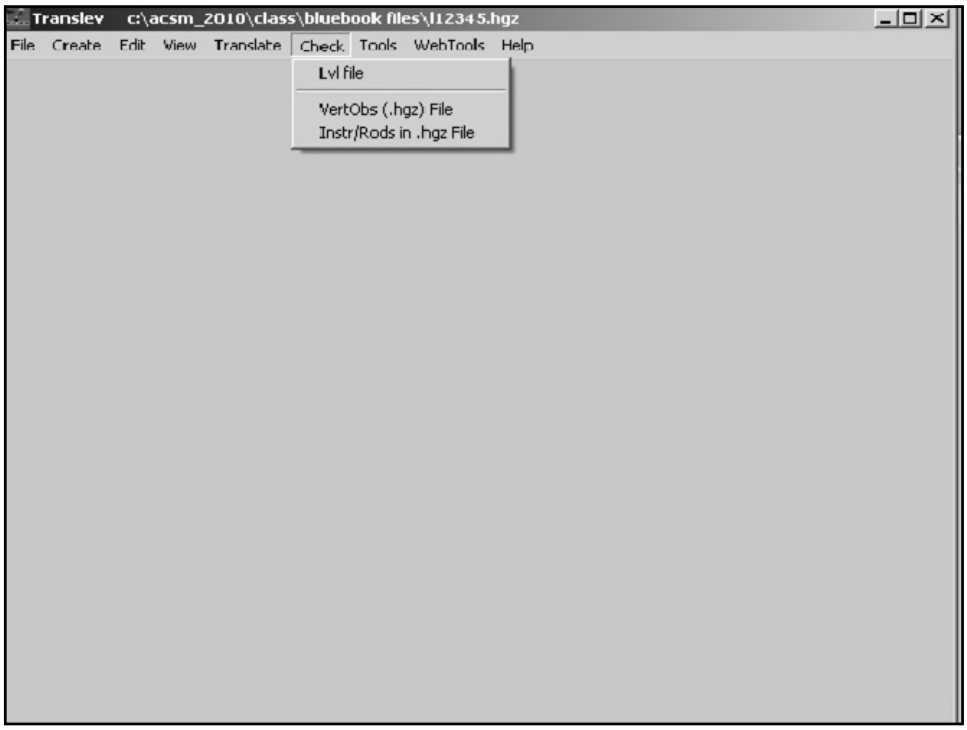

c:\acsm_2010\class\bluebook files\l12345.hgz
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000040*15*COLLIMATION CHECK TAKEN DAILY AND STORED INTERNALLY IN DNA03
000050*15*AND USED TO CORRECT EACH ROD READING
000060*15*CREATED BY TRANSLEV VERSION 4.14
000070*30*1000FLAGPOLE KM0.000 MT67.54200 HV81813812050772224
000080*30*10017550002 KM0.097 MT68.20718 HV78393812040772224
000090*30*1002OBSERVATORY KM0.159 MT68.20067 HV78433812070772222
000100*30*1003TWIN OAK KM0.653 MT65.67886 HV31223812060772203
000110*40*060323243332228 39627226 39627227 150130030 .035R1253
000120*41*06032310021003R12531320C9.0 10.202 6 KM0.495MT-2.52238 CLS
000130*43*060323100210031253-0.123 C10.1 10.6 O -143.728
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000220*40*060324243332228 39627226 39627227 145130030 .025R0945
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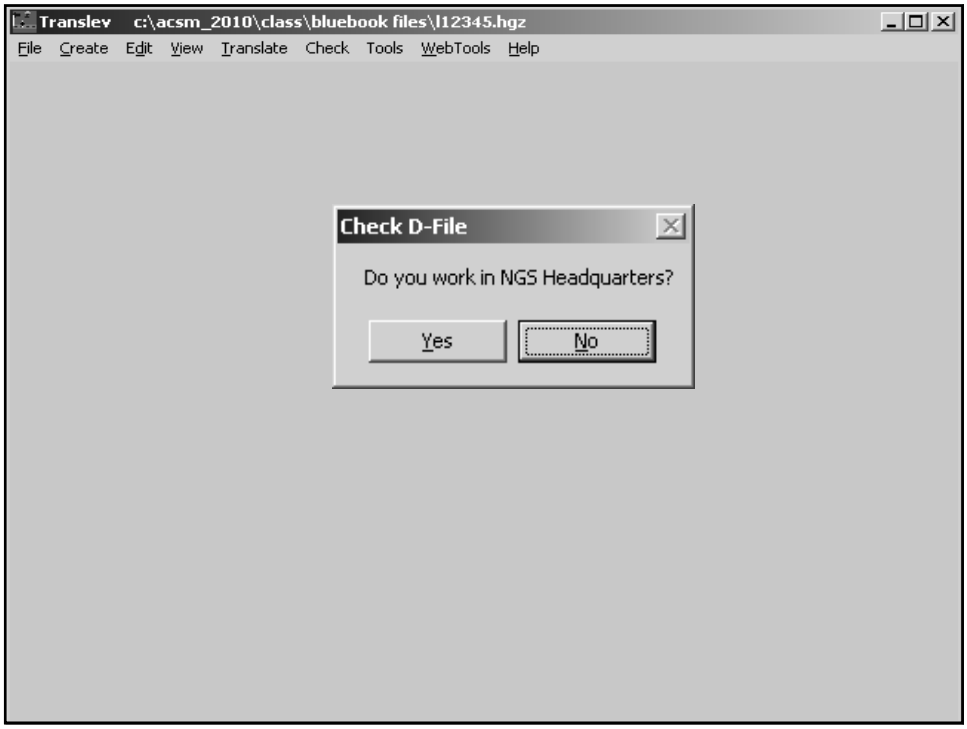

c:\acsm_2010\class\bluebook files\l12345.hgz
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000050*15*AND USED TO CORRECT EACH ROD READING
000060*15*CREATED BY TRANSLEV VERSION 4.14
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000150*43*060323100310021328 0.272 C10.1 11.2 O 145.204
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000190*40*060323243332228 39627226 39627227 145130030 .035R1433
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000270*43*060324100110021 0140.031 C7.4 8.5 O 16.318
000280*VA*


Line Information
Record Type *10 * Line No. 000020
Accession Number (Lnnnnn) L12345
Line/Part Number nnnn 1
Relevel Code (R)
Field Obs Start (yyyymmdd) 20060323
Field Obs Comp (yyyymmdd) 20060324
Units (aa) MM
Tolerance Factor (n.n) 4.0
Order/Class of survey (nn) 12
State or Country (aa) VA
State or Country2 (aa)
State or Country3 (aa)
Responsible Person (aaa) CLS
Observing Agency (aaaaaa) NGS
Single/Double Run (n) 2
Rejection Method (A or B) B
Position Code (n) 1
Okay
Cancel
Overwrite


Line Information
Record Type *10 * Line No. 000020
Accession Number (Lnnnnn) L12345
Line/Part Number nnnn
Relevel Code (R)
Field Obs Start (yyyymmdd) 20060323
Field Obs Comp (yyyymmdd) 20060324
Units (aa) MM
Tolerance Factor (n.n) 4.0
Order/Class of survey (nn) 12
State or Country (aa) VA
State or Country2 (aa)
State or Country3 (aa)
Responsible Person (aaa) CLS
Observing Agency (aaaaaa) NGS
Single/Double Run (n) 2
Rejection Method (A or B) B
Position Code (n) 1
Okay
Cancel
Overwrite


c:\acsm_2010\class\bluebook files\l12345.hgz
File Insert Delete Edit
Save
Print
Close
A*VERTOBS NGS NATIONAL GEODETIC SURVEY 88 20100308
D*L12345 2006032320060324MM4.0 12VA CLSNGS 2B1
1*CORBIN TEST LINE
000040*15*COLLIMATION CHECK TAKEN DAILY AND STORED INTERNALLY IN DNA03
000050*15*AND USED TO CORRECT EACH ROD READING
000060*15*CREATED BY TRANSLEV VERSION 4.14
000070*30*1000FLAGPOLE KM0.000 MT67.54200 HV81813812050772224
000080*30*10017550002 KM0.097 MT68.20718 HV78393812040772224
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000100*30*1003TWIN OAK KM0.653 MT65.67886 HV31223812060772203
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000170*41*06032310021001R14071416C9.2 10.212 2 KM0.062MT0.00650 GWA
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000250*40*060324243332228 39627226 39627227 145130030 .025R1014
000260*41*06032410011002R10141020C8.0 7.8 11 2 KM0.062MT-0.00655 DAS
000270*43*0603241001100210140.031 C7.4 8.5 O 16.318
000280*VA*


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File Create Edit View Translate Check Tools WebTools Help
Lvl file
VertObs (.hgz) File
Instr/Rods in .hgz File


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File Create Edit View Translate Check Tools WebTools Help
Check D-File
Do you work in NGS Headquarters?
Yes
No


Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Check .hgz File
File checking complete.
0 errors.
0 warnings.
OK

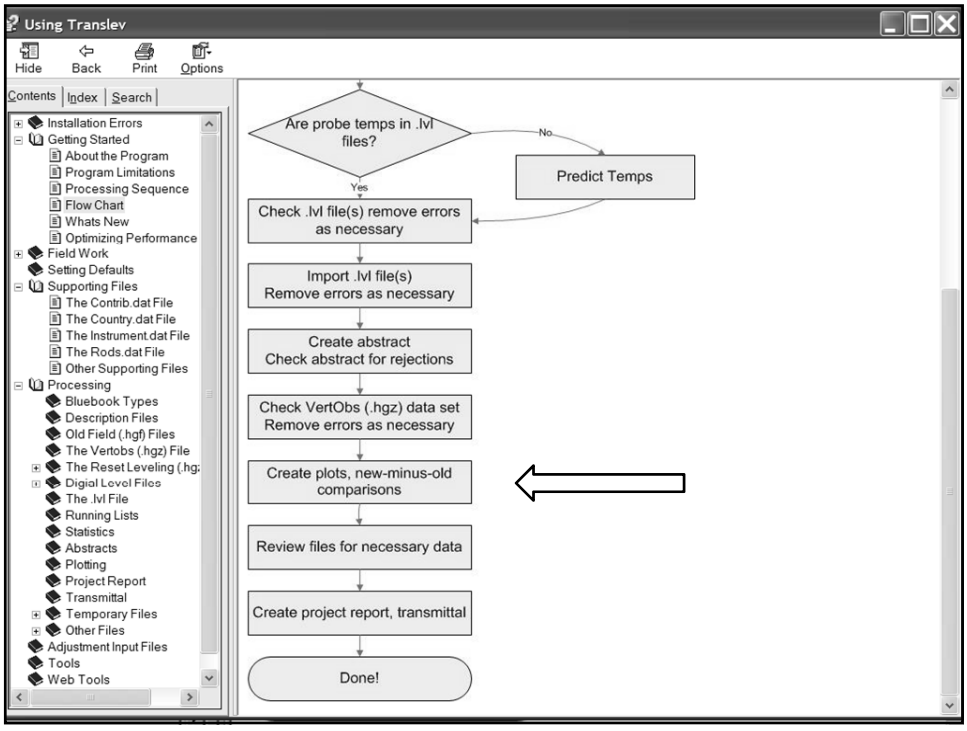
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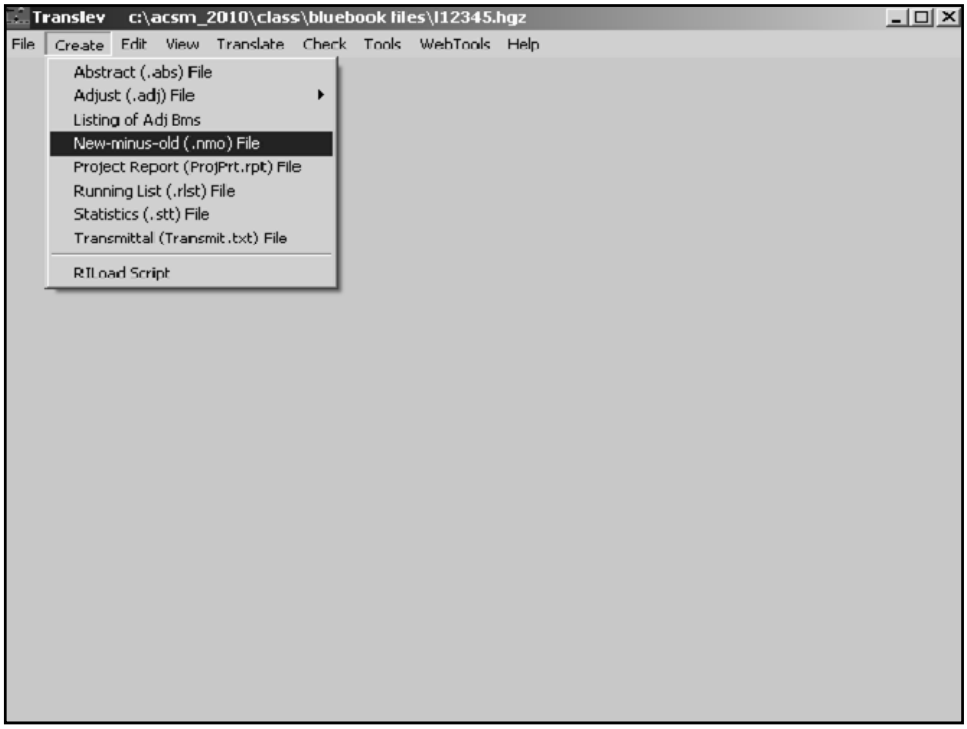
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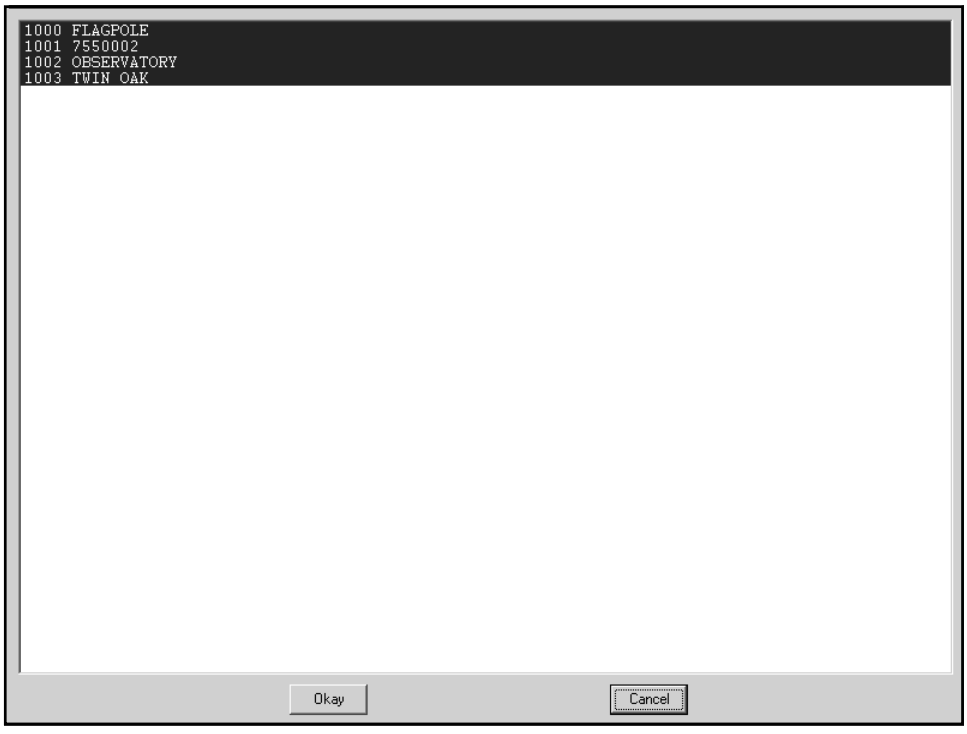
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TRANSLEV CHECK (Version 4.14
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STARTED: 14:59:28 Monday, 08 March 2010
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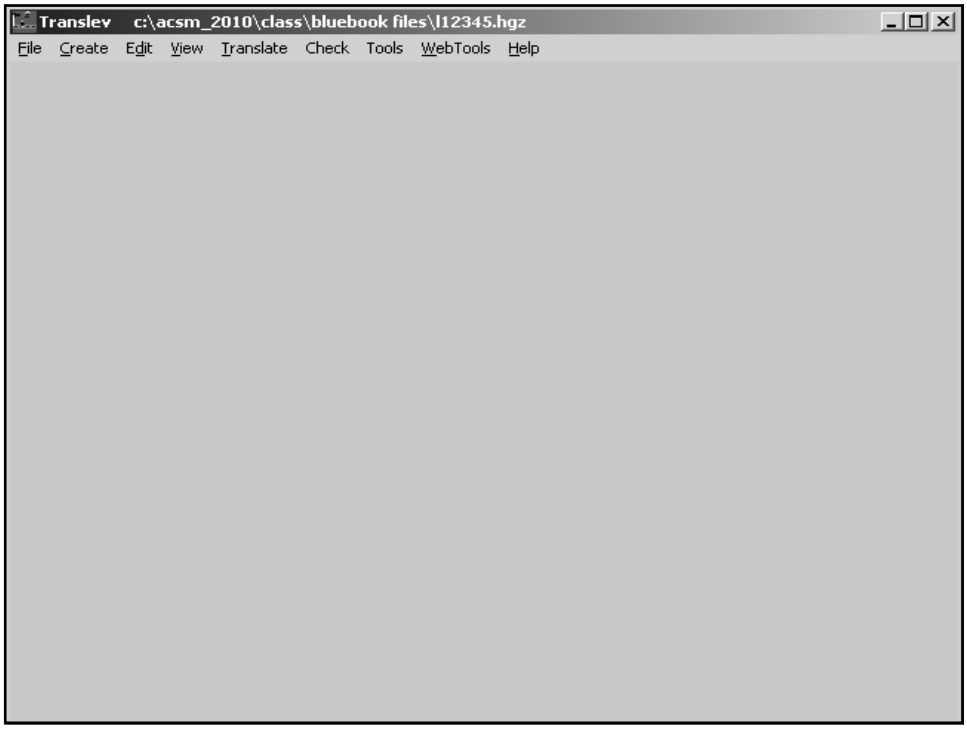
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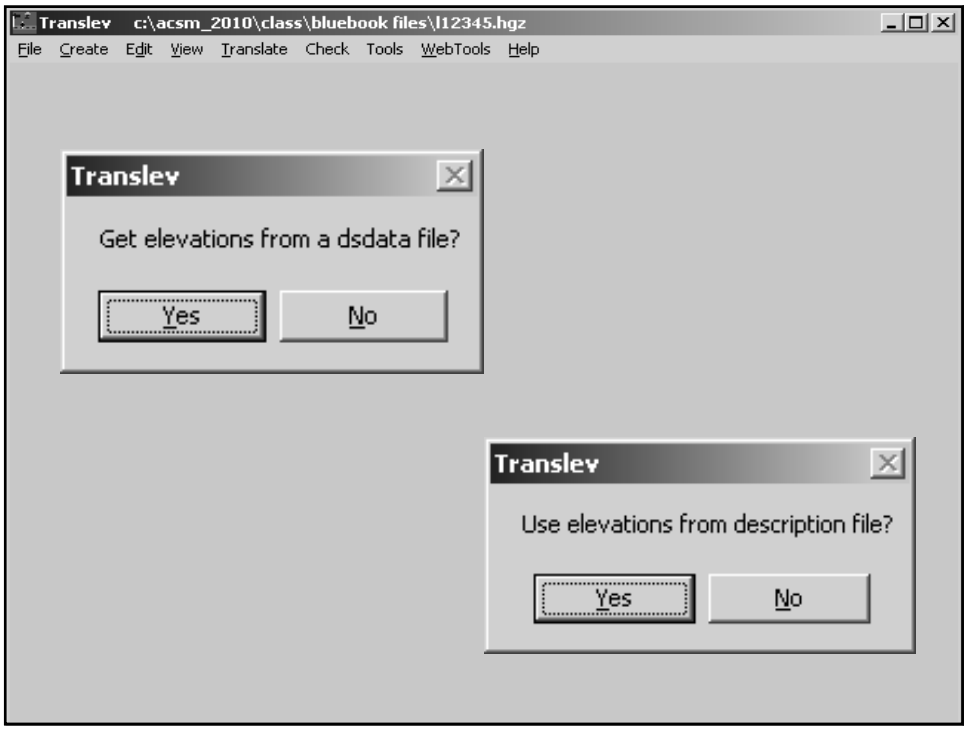

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END OF ERROR LISTING
ERRORS: 0
WARNINGS: 0
COMPLETED: 14:59:28 Monday, 08 March 2010
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File
Create
Edit
View
Translate
Check
Tools
WebTools
Help
Abstract (.abs) File
Adjust (.adj) File
Listing of Adj Bms
New-minus-old (.nmo) File
Project Report (ProjPrt.rpt) File
Running List (.rlst) File
Statistics (.stt) File
Transmittal (Transmit.txt) File
RELoad Script


1000 FLAGPOLE
1001 7550002
1002 OBSERVATORY
1003 TWIN OAK
Okay
Cancel


Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help


Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Translev
Get elevations from a dsdata file?
Yes
No
Translev
Use elevations from description file?
Yes
No

c:\acsm_2010\class\bluebook files\l12345.nmo

File

CORBIN TEST LINE

L12345/
ORDER 1 CLASS 2

---------- NEW MINUS OLD COMPARISON ----------

SSN	PID	MARK DESIGNATION	-DIST-	---NEW----	---OLD----	DIF (MM)	ALLOWABLE	
1000	HV8181	FLAGPOLE		67.54200	67.5420	0.00		
			0.097	0.66518	0.6650	0.18	1.26	
1001	HV7839	7550002		68.20718	68.2070	0.18		
			0.062	-0.00651	-0.0060	-0.51	1.26	
1002	HV7843	OBSERVATORY		68.20067	68.2010	-0.33		
			0.494	-2.52181	-2.5250	3.19	2.81 *	
1003	HV3122	TWIN OAK		65.67886	65.6760	2.86		
		Mean difference				0.68		

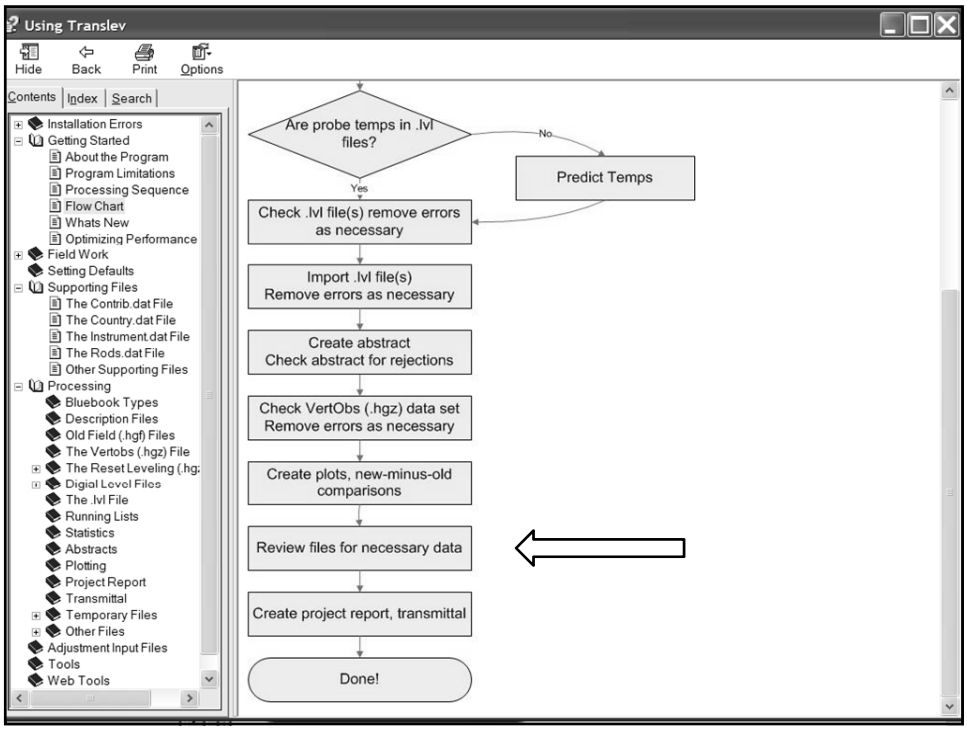
* - Exceeds allowable for order and class of survey.

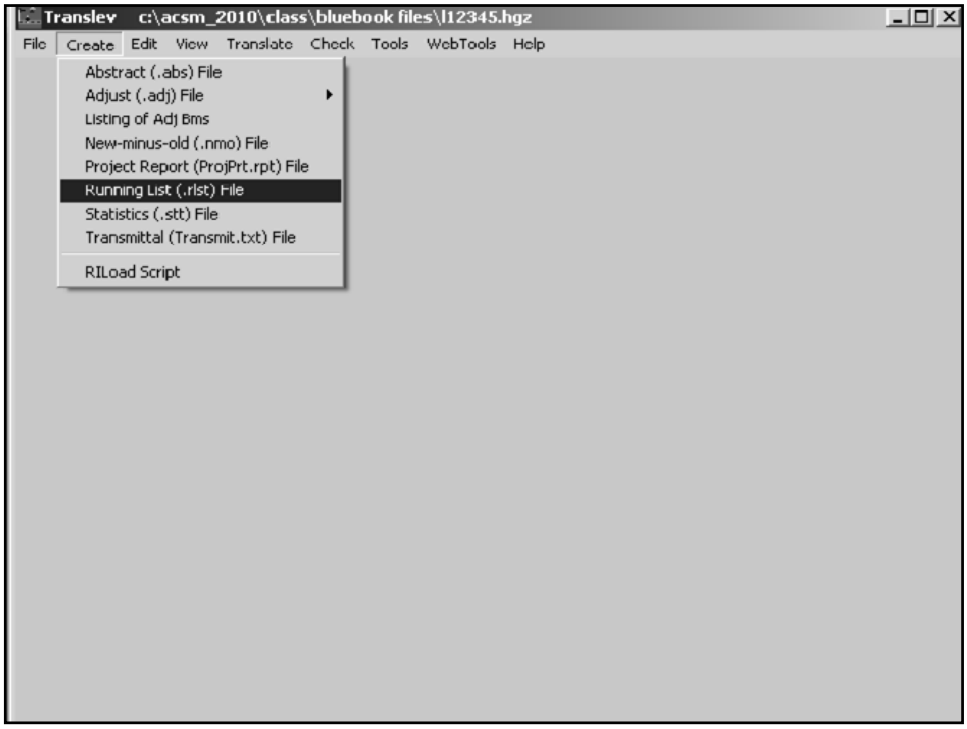
---------- CLOSURE ANALYSIS BETWEEN PUBLISHED BENCH MARKS ----------

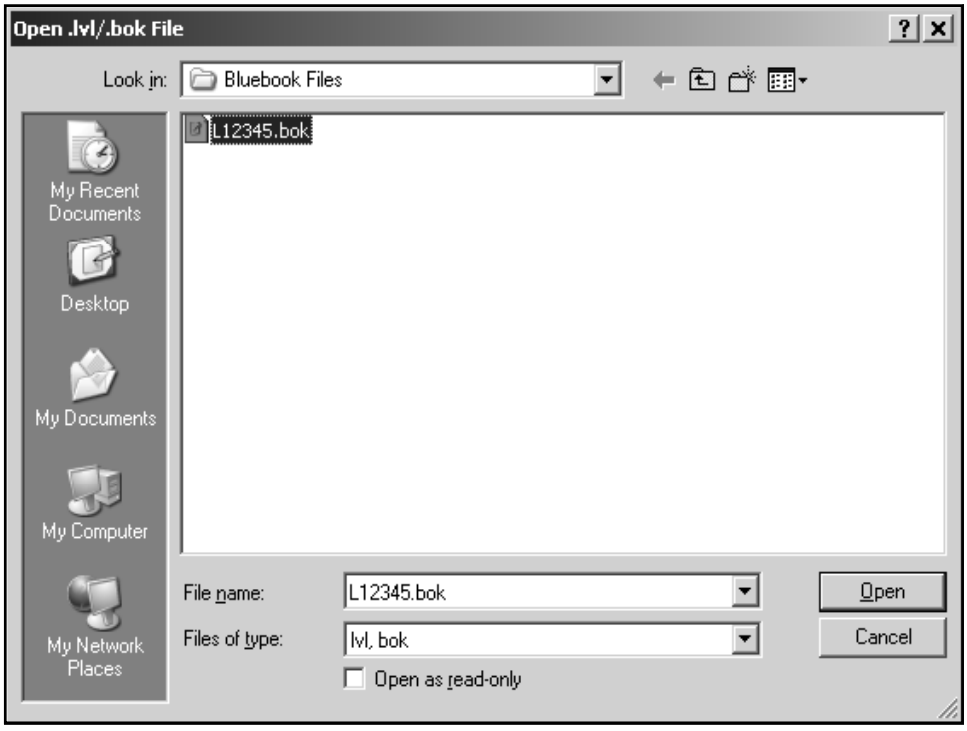
FROM BENCH MARK	TO BENCH MARK	DIST,KM	PUB ELEV DIFF, M	OBS ELEV DIFF, M	PUB-OBS DIFF,MM	O/C	
1000 FLAGPOLE	1001 7550002	0.097	0.6650	0.66518	-0.18	1	1
1000 FLAGPOLE	1002 OBSERVATORY	0.159	0.6590	0.65867	0.33	1	1
1000 FLAGPOLE	1003 TWIN OAK	0.653	-1.8660	-1.86314	-2.86	1	2
1001 7550002	1002 OBSERVATORY	0.062	-0.0060	-0.00651	0.51	1	1
1001 7550002	1003 TWIN OAK	0.556	-2.5310	-2.52832	-2.68	1	2
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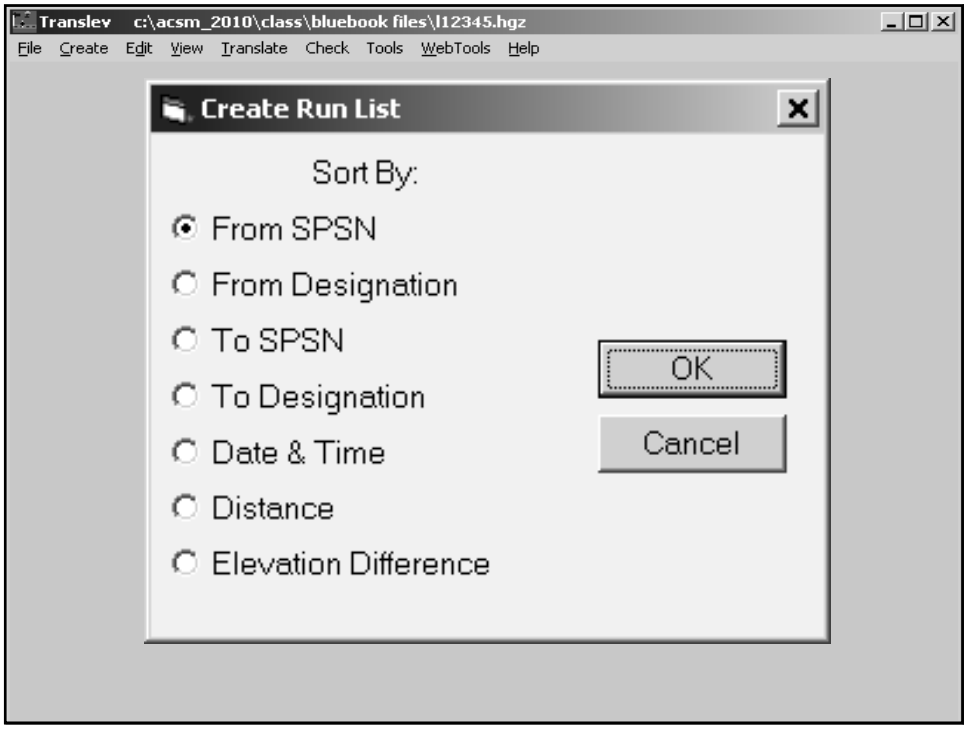
Note: Distances shown were determined from the shortest path between bench marks.

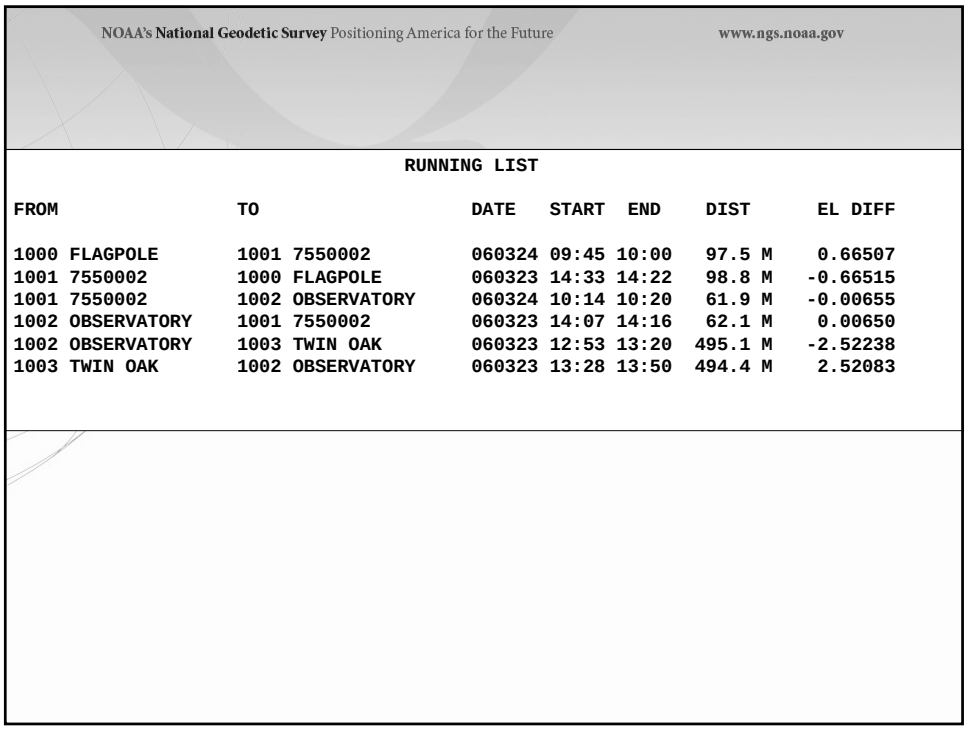
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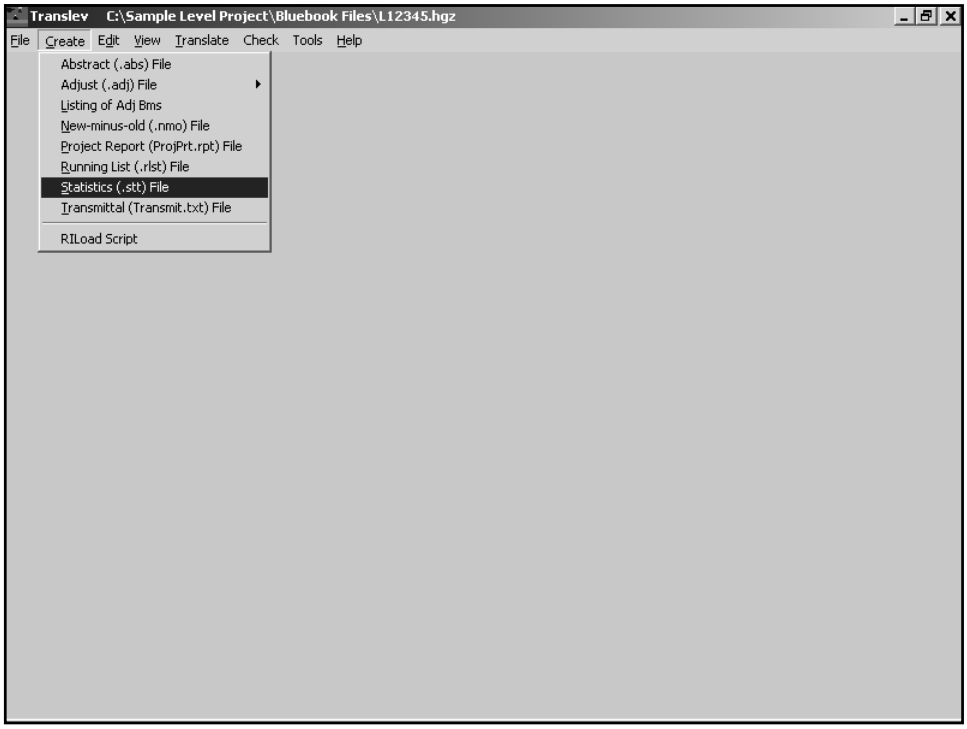


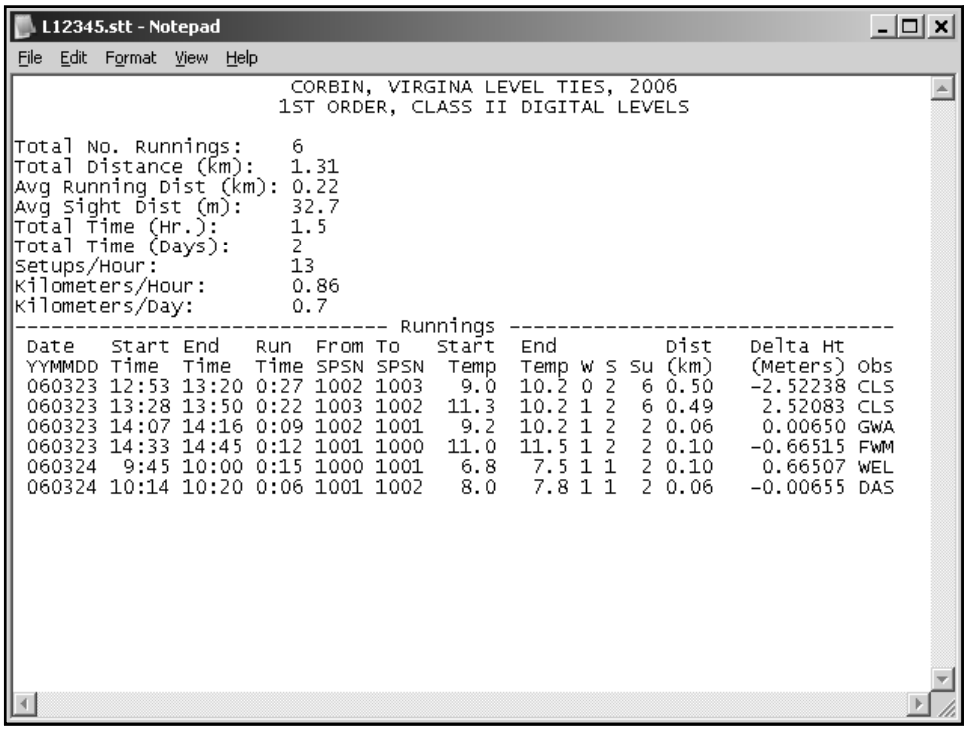

Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File
Create
Edit
View
Translate
Check
Tools
WebTools
Help
Abstract (.abs) File
Adjust (.adj) File
Listing of Adj Bms
New-minus-old (.nmo) File
Project Report (ProjPrt.rpt) File
Running List (.rlst) File
Statistics (.stt) File
Transmittal (Transmit.txt) File
RILoad Script

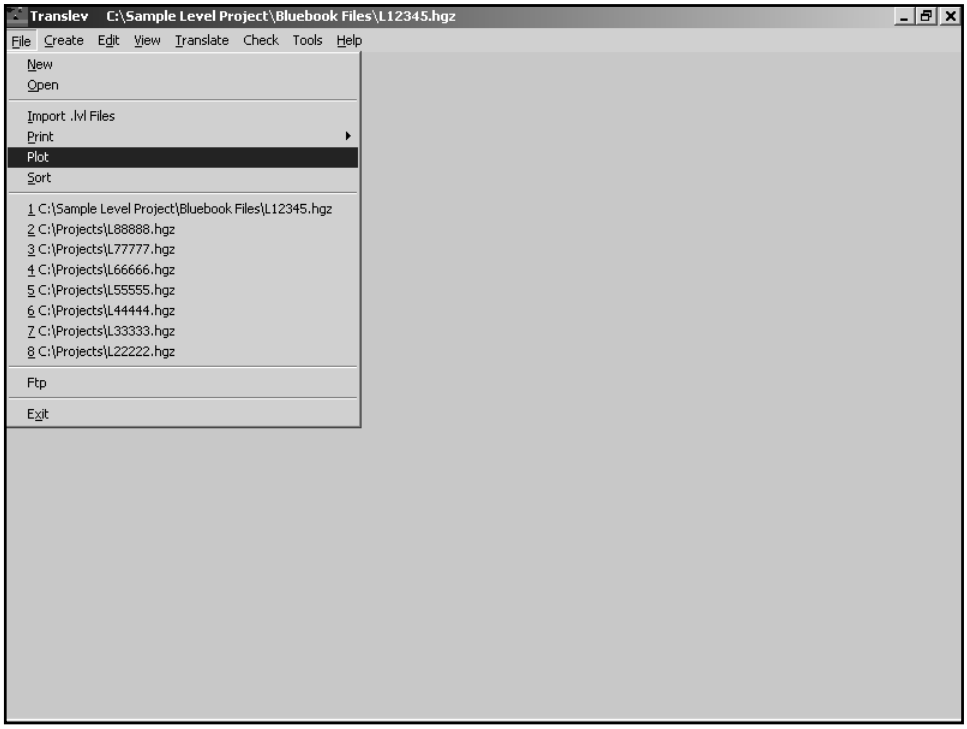

Open .lvl/.bok File
Look in:
Bluebook Files
L12345.bok
My Recent Documents
Desktop
My Documents
My Computer
My Network Places
File name:
L12345.bok
Files of type:
lvl, bok
Open as read-only
Open
Cancel

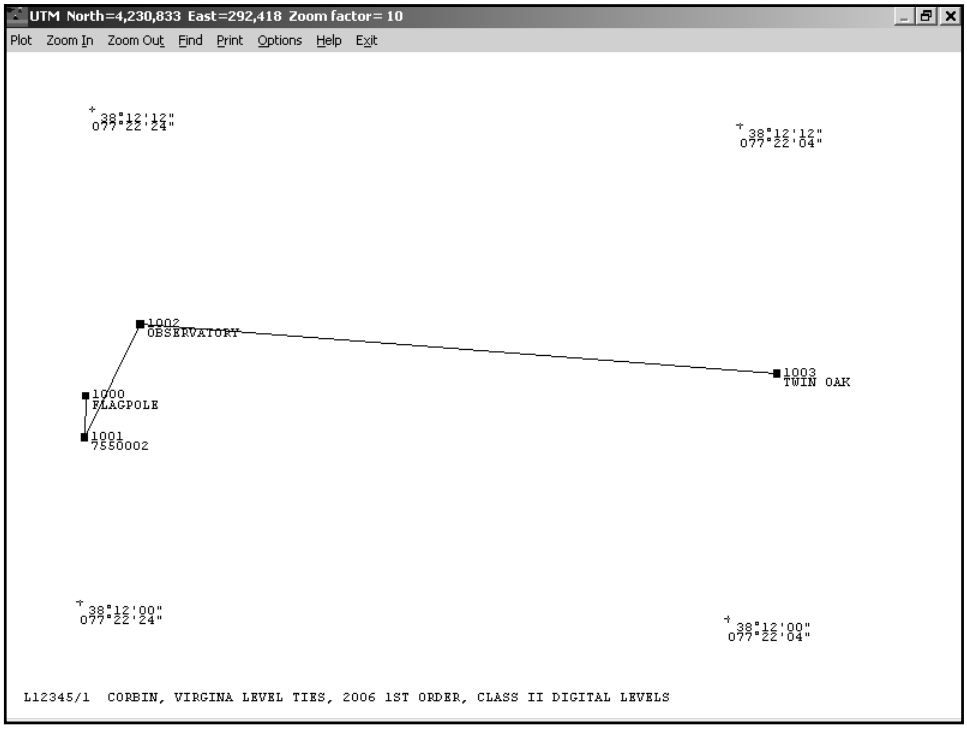

Translev c:\acsm_2010\class\bluebook files\l12345.hgz
File Create Edit View Translate Check Tools WebTools Help
Create Run List
Sort By:
From SPSN
From Designation
To SPSN
To Designation
Date & Time
Distance
Elevation Difference
OK
Cancel

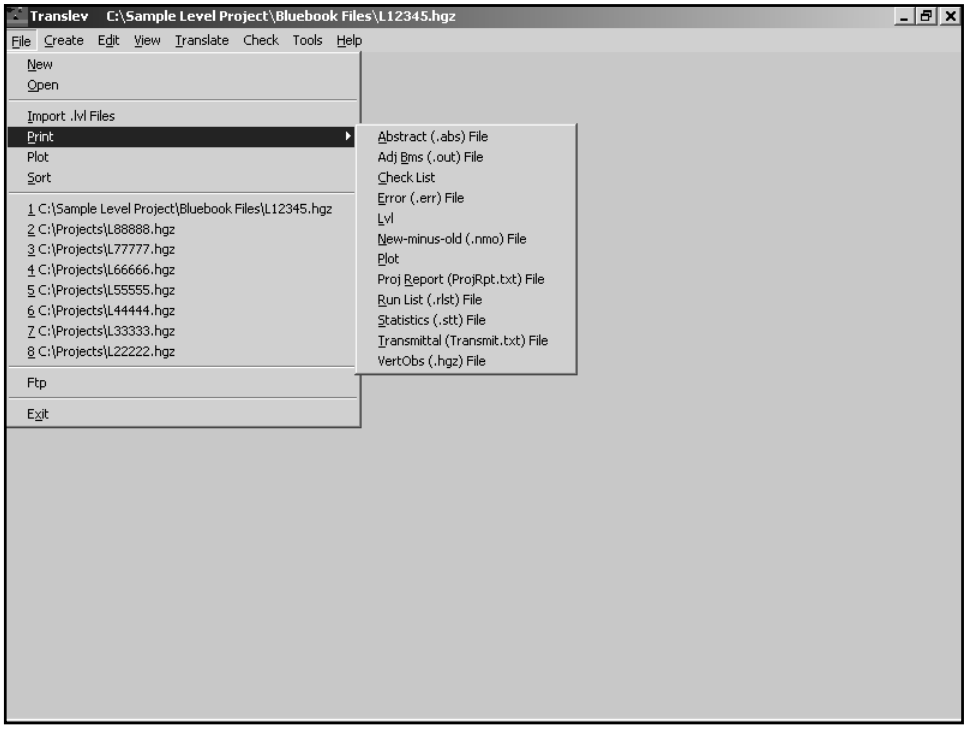

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
RUNNING LIST
FROM TO DATE START END DIST EL DIFF
1000 FLAGPOLE 1001 7550002 060324 09:45 10:00 97.5 M 0.66507
1001 7550002 1000 FLAGPOLE 060323 14:33 14:22 98.8 M -0.66515
1001 7550002 1002 OBSERVATORY 060324 10:14 10:20 61.9 M -0.00655
1002 OBSERVATORY 1001 7550002 060323 14:07 14:16 62.1 M 0.00650
1002 OBSERVATORY 1003 TWIN OAK 060323 12:53 13:20 495.1 M -2.52238
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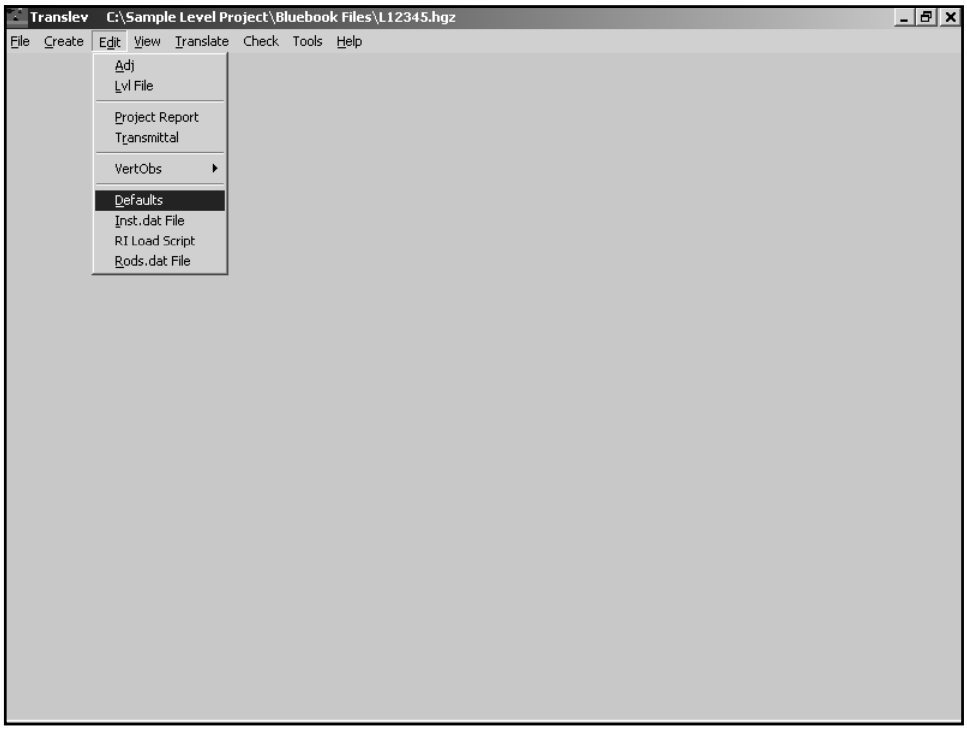

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
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Abstract (.abs) File
Adjust (.adj) File
Listing of Adj Bms
New-minus-old (.nmo) File
Project Report (ProjPrt.rpt) File
Running List (.rlst) File
Statistics (.stt) File
Transmittal (Transmit.txt) File
RILoad Script


L12345.stt - Notepad
File Edit Format View Help
CORBIN, VIRGINA LEVEL TIES, 2006
1ST ORDER, CLASS II DIGITAL LEVELS
Total No. Runnings: 6
Total Distance (km): 1.31
Avg Running Dist (km): 0.22
Avg Sight Dist (m): 32.7
Total Time (Hr.): 1.5
Total Time (Days): 2
Setups/Hour: 13
Kilometers/Hour: 0.86
Kilometers/Day: 0.7
Runnings
Date Start End Run From To Start End Dist Delta Ht
YYMMDD Time Time Time SPSN SPSN Temp Temp w S Su (km) (Meters) Obs
060323 12:53 13:20 0:27 1002 1003 9.0 10.2 0 2 6 0.50 -2.52238 CLS
060323 13:28 13:50 0:22 1003 1002 11.3 10.2 1 2 6 0.49 2.52083 CLS
060323 14:07 14:16 0:09 1002 1001 9.2 10.2 1 2 2 0.06 0.00650 GWA
060323 14:33 14:45 0:12 1001 1000 11.0 11.5 1 2 2 0.10 -0.66515 FWM
060324 9:45 10:00 0:15 1000 1001 6.8 7.5 1 1 2 0.10 0.66507 WEL
060324 10:14 10:20 0:06 1001 1002 8.0 7.8 1 1 2 0.06 -0.00655 DAS

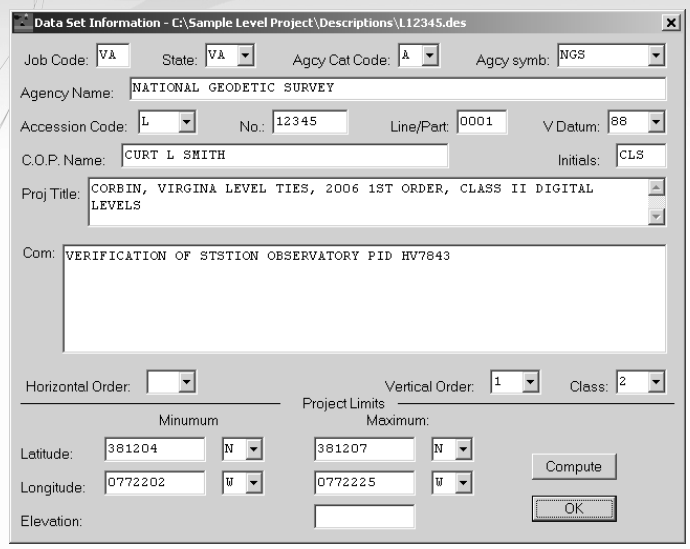

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
New
Open
Import .lvl Files
Print
Plot
Sort
1 C:\Sample Level Project\Bluebook Files\L12345.hgz
2 C:\Projects\L88888.hgz
3 C:\Projects\L77777.hgz
4 C:\Projects\L66666.hgz
5 C:\Projects\L55555.hgz
6 C:\Projects\L44444.hgz
7 C:\Projects\L33333.hgz
8 C:\Projects\L22222.hgz
Ftp
Exit

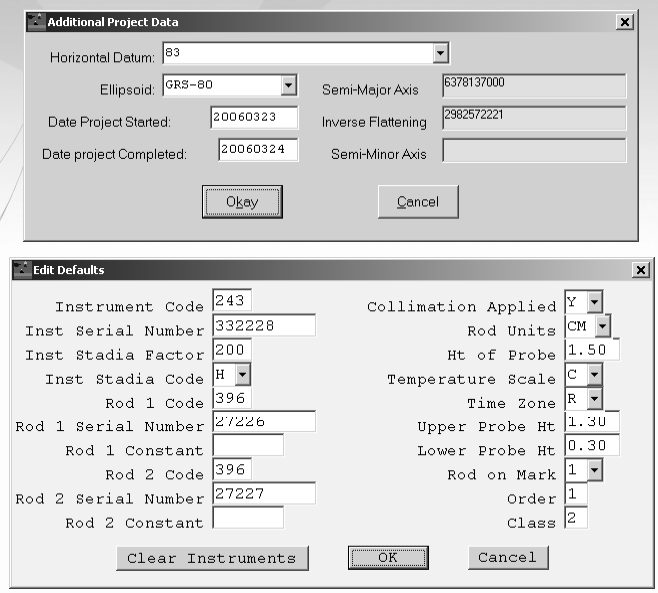

UTM North=4,230,833 East=292,418 Zoom factor= 10
Plot Zoom In Zoom Out Find Print Options Help Exit
38°12'12"
077°22'24"
38°12'12"
077°22'04"
1002
OBSERVATORY
1003
TWIN OAK
1000
FLAGPOLE
1001
7550002
38°12'00"
077°22'24"
38°12'00"
077°22'04"
L12345/1 CORBIN, VIRGINA LEVEL TIES, 2006 1ST ORDER, CLASS II DIGITAL LEVELS

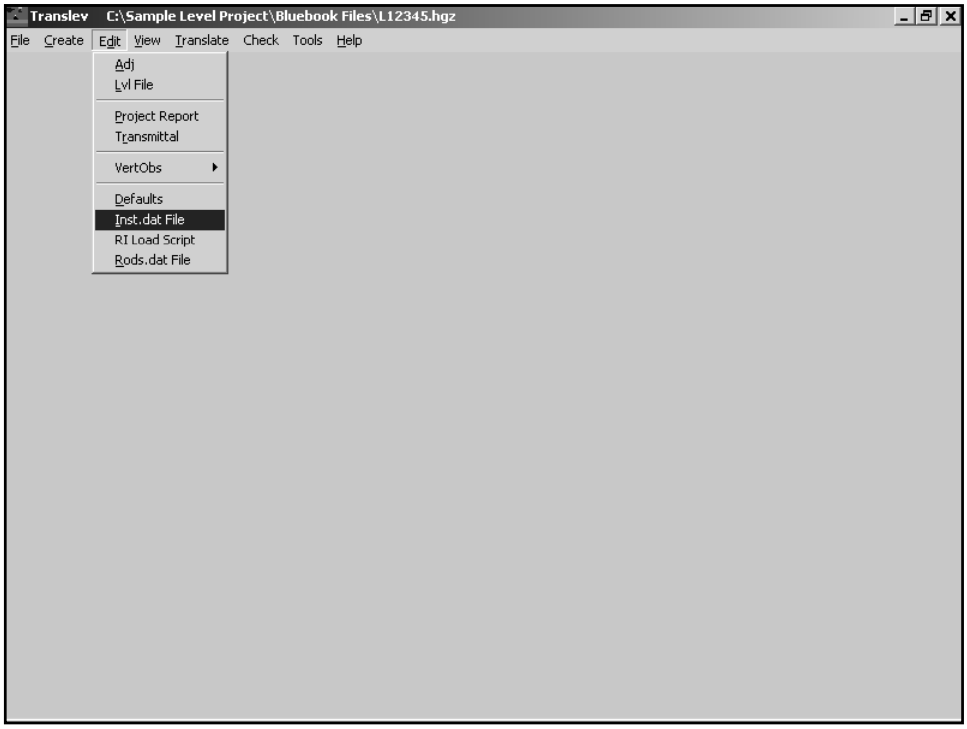

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
New
Open
Import .lvl Files
Print
Plot
Sort
1 C:\Sample Level Project\Bluebook Files\L12345.hgz
2 C:\Projects\L88888.hgz
3 C:\Projects\L77777.hgz
4 C:\Projects\L66666.hgz
5 C:\Projects\L55555.hgz
6 C:\Projects\L44444.hgz
7 C:\Projects\L33333.hgz
8 C:\Projects\L22222.hgz
Ftp
Exit
Abstract (.abs) File
Adj Bms (.out) File
Check List
Error (.err) File
Lvl
New-minus-old (.nmo) File
Plot
Proj Report (ProjRpt.txt) File
Run List (.rlst) File
Statistics (.stt) File
Transmittal (Transmit.txt) File
VertObs (.hgz) File

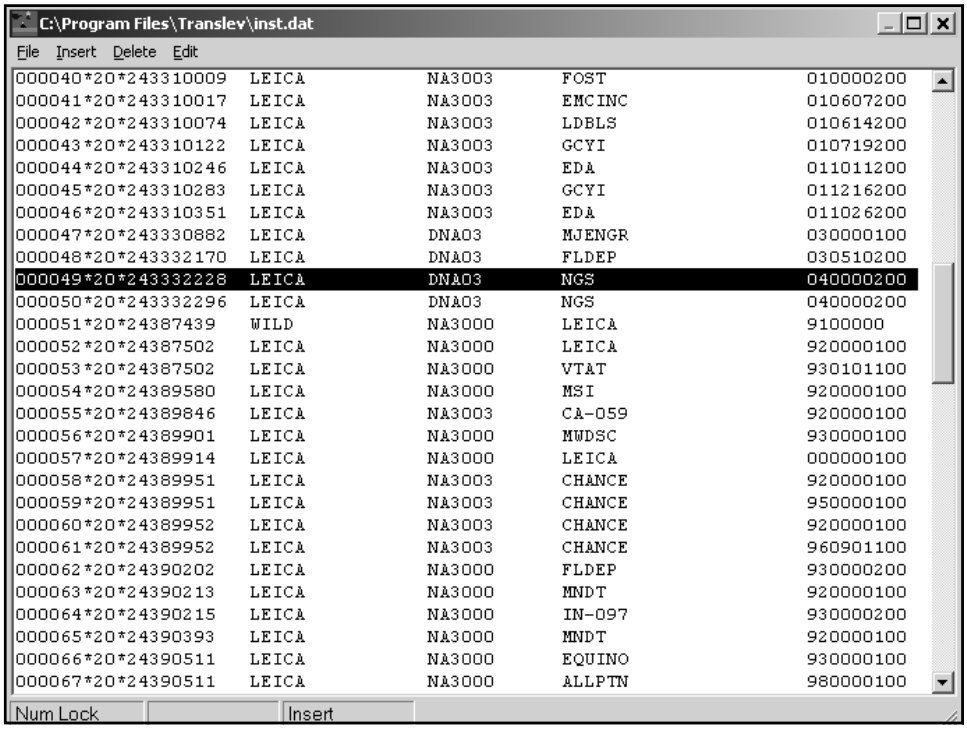

Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Adj
Lvl File
Project Report
Transmittal
VertObs
Defaults
Inst.dat File
RI Load Script
Rods.dat File

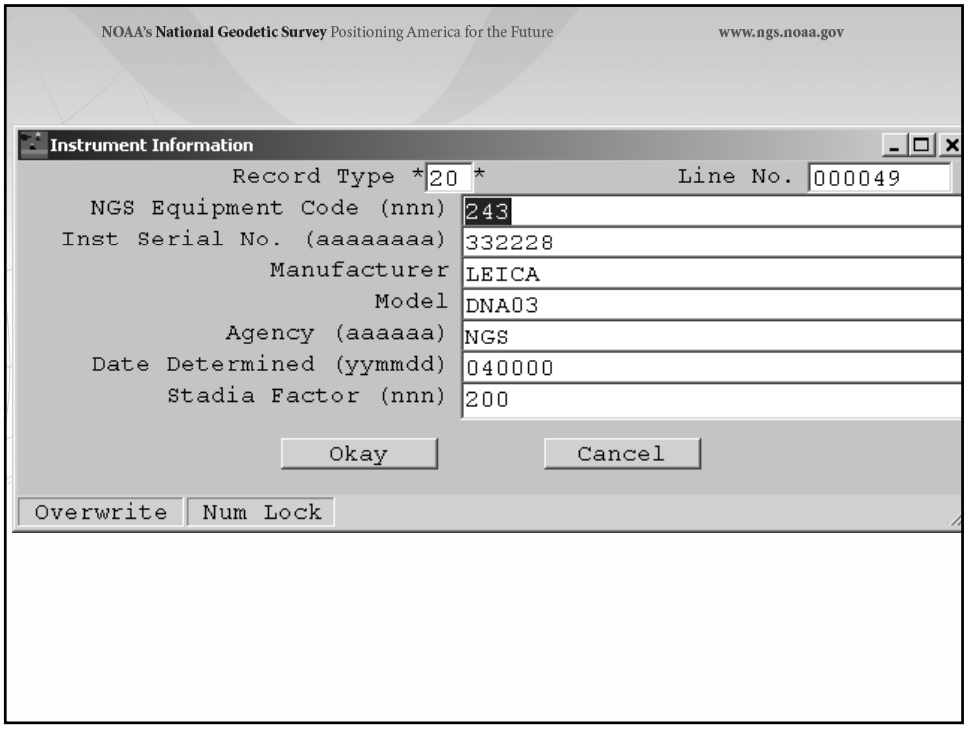
EDIT Defaults






Translev C:\Sample Level Project\Bluebook Files\L12345.hgz
File Create Edit View Translate Check Tools Help
Adj
Lvl File
Project Report
Transmittal
VertObs
Defaults
Inst.dat File
RI Load Script
Rods.dat File


C:\Program Files\Translev\inst.dat
File Insert Delete Edit
000040*20*243310009 LEICA NA3003 FOST 010000200
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000042*20*243310074 LEICA NA3003 LDBLS 010614200
000043*20*243310122 LEICA NA3003 GCYI 010719200
000044*20*243310246 LEICA NA3003 EDA 011011200
000045*20*243310283 LEICA NA3003 GCYI 011216200
000046*20*243310351 LEICA NA3003 EDA 011026200
000047*20*243330882 LEICA DNA03 MJENGR 030000100
000048*20*243332170 LEICA DNA03 FLDEP 030510200
000049*20*243332228 LEICA DNA03 NGS 040000200
000050*20*243332296 LEICA DNA03 NGS 040000200
000051*20*24387439 WILD NA3000 LEICA 9100000
000052*20*24387502 LEICA NA3000 LEICA 920000100
000053*20*24387502 LEICA NA3000 VTAT 930101100
000054*20*24389580 LEICA NA3000 MSI 920000100
000055*20*24389846 LEICA NA3003 CA-059 920000100
000056*20*24389901 LEICA NA3000 MWDSC 930000100
000057*20*24389914 LEICA NA3000 LEICA 000000100
000058*20*24389951 LEICA NA3003 CHANCE 920000100
000059*20*24389951 LEICA NA3003 CHANCE 950000100
000060*20*24389952 LEICA NA3003 CHANCE 920000100
000061*20*24389952 LEICA NA3003 CHANCE 960901100
000062*20*24390202 LEICA NA3000 FLDEP 930000200
000063*20*24390213 LEICA NA3000 MNDT 920000100
000064*20*24390215 LEICA NA3000 IN-097 930000200
000065*20*24390393 LEICA NA3000 MNDT 920000100
000066*20*24390511 LEICA NA3000 EQUINO 930000100
000067*20*24390511 LEICA NA3000 ALLPTN 980000100
Num Lock
Insert



INST.DAT File in Transley Software

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000045*20*243310283  LEICA   NA3003   GCYI     011216200
000046*20*243310351  LEICA   NA3003   EDA      011026200
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000048*20*243332170  LEICA   DNA03    FLDEP    030510200
000049*20*243332228  LEICA   DNA03    NGS      040000200
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000062*20*24390202   LEICA   NA3000   FLDEP    930000200
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000065*20*24390393   LEICA   NA3000   MNDT     920000100
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000069*20*24390966   LEICA   NA3000   TOWILL   940000100
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20 Instrument Information Record

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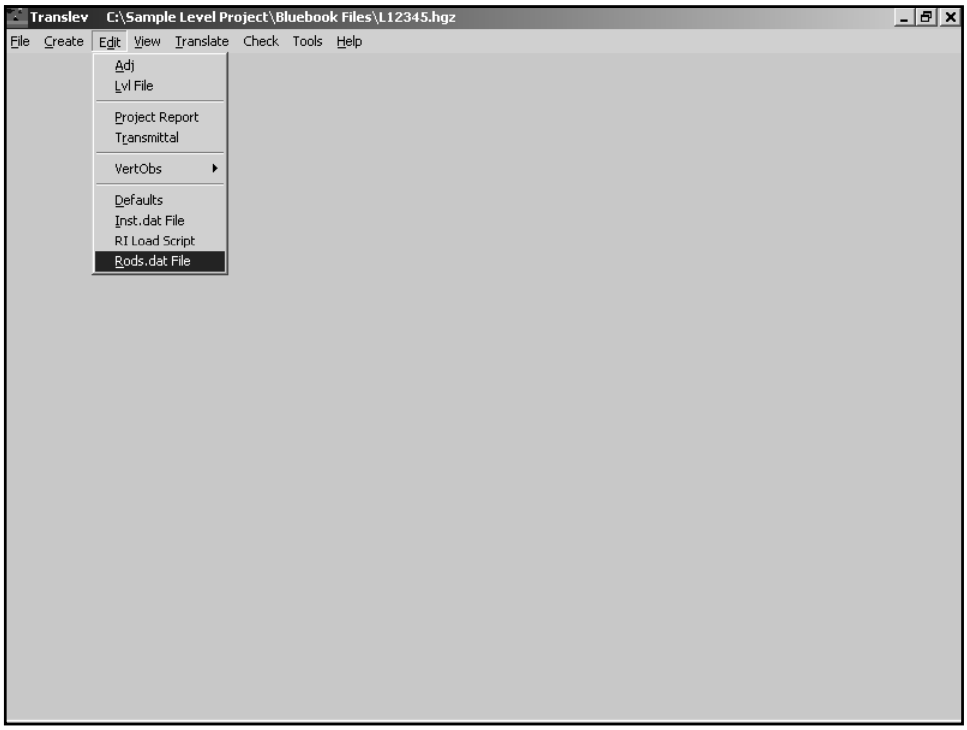
Unless otherwise noted, data fields are required and are of type alpha (left-justified). See Data Field Types on p. 6-25 ff. for requirements of the six data types (alpha, blank, constant, floating-point, integer, and specific character) with the details of justification, decimal point placement, etc.

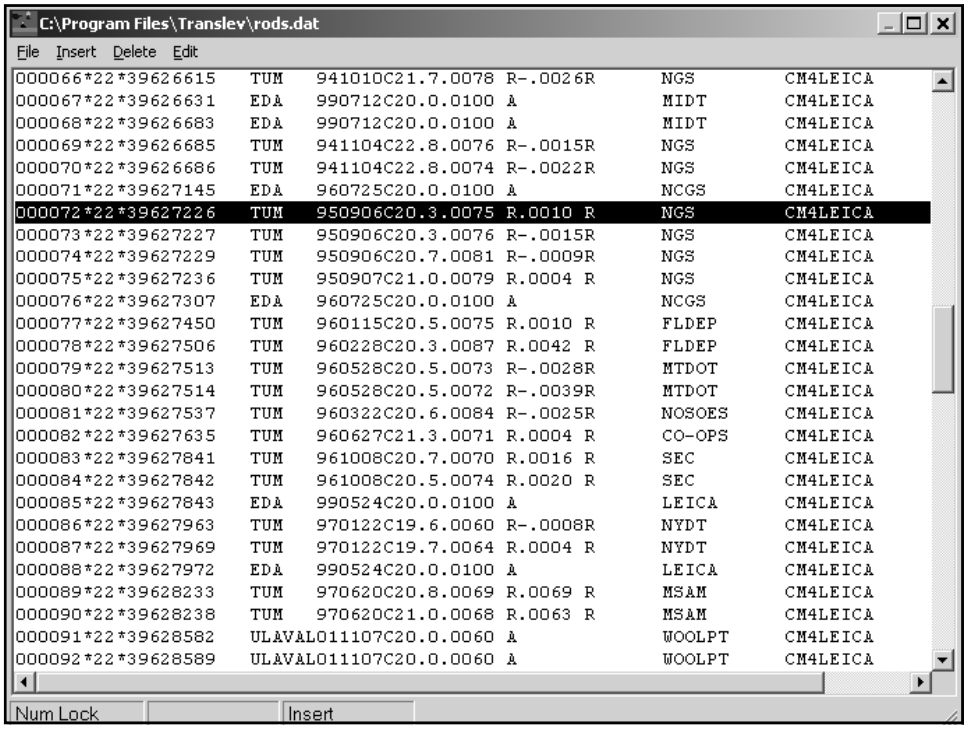
20 FORMAT

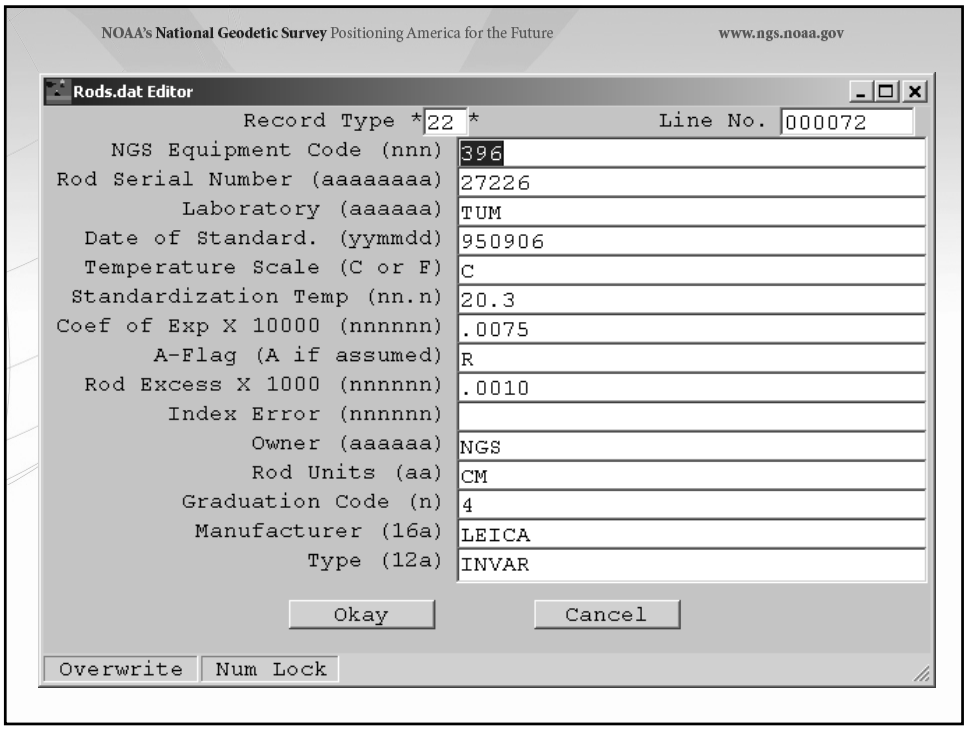
Card col.	
CC 01-06	Sequence number. Integer. Increment by 10 on successive records to allow for insertions. Optional.
CC 07-10	Data code. Must be *20*.
CC 11-13	NGS Survey Equipment Code. Integer. See Annex F.
CC 14-21	Instrument serial number, identical to the s/n given in the corresponding *40* record.
CC 22-37	Instrument manufacturer.
CC 38-49	Instrument model or type.
CC 50-69	Agency or firm which owns or has the custody of the instrument using the code in Annex C assigned to the agency.
CC 70-77	Determination date of stadia factor. Integer. Century, year, month, day (yymmdd). If day is unknown, leave last two columns blank. If month is unknown, leave last four columns blank.
CC 78-80	Stadia factor. Integer. Instrument-specific number which when multiplied by stadia intercept gives distance to rod.

Column numbers and example data, *20* RECORD

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000000000111111111122222222223333333333444444444455555555556666666666777777777 8
123456789012345678901234567890123456789012345678901234567890123456789012345678 90
nnnnnn*20*23190760    ZEISS/OBERKOCHENNI1         NGS                  19990217100
iiiiiisiisiiiaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaiiiiiiiiii
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C:\Program Files\Transiev\rods.dat
File Insert Delete Edit
000066*22*39626615 TUM 941010C21.7.0078 R-.0026R NGS CM4LEICA
000067*22*39626631 EDA 990712C20.0.0100 A MIDT CM4LEICA
000068*22*39626683 EDA 990712C20.0.0100 A MIDT CM4LEICA
000069*22*39626685 TUM 941104C22.8.0076 R-.0015R NGS CM4LEICA
000070*22*39626686 TUM 941104C22.8.0074 R-.0022R NGS CM4LEICA
000071*22*39627145 EDA 960725C20.0.0100 A NCGS CM4LEICA
000072*22*39627226 TUM 950906C20.3.0075 R.0010 R NGS CM4LEICA
000073*22*39627227 TUM 950906C20.3.0076 R-.0015R NGS CM4LEICA
000074*22*39627229 TUM 950906C20.7.0081 R-.0009R NGS CM4LEICA
000075*22*39627236 TUM 950907C21.0.0079 R.0004 R NGS CM4LEICA
000076*22*39627307 EDA 960725C20.0.0100 A NCGS CM4LEICA
000077*22*39627450 TUM 960115C20.5.0075 R.0010 R FLDEP CM4LEICA
000078*22*39627506 TUM 960228C20.3.0087 R.0042 R FLDEP CM4LEICA
000079*22*39627513 TUM 960528C20.5.0073 R-.0028R MTDOT CM4LEICA
000080*22*39627514 TUM 960528C20.5.0072 R-.0039R MTDOT CM4LEICA
000081*22*39627537 TUM 960322C20.6.0084 R-.0025R NOSOES CM4LEICA
000082*22*39627635 TUM 960627C21.3.0071 R.0004 R CO-OPS CM4LEICA
000083*22*39627841 TUM 961008C20.7.0070 R.0016 R SEC CM4LEICA
000084*22*39627842 TUM 961008C20.5.0074 R.0020 R SEC CM4LEICA
000085*22*39627843 EDA 990524C20.0.0100 A LEICA CM4LEICA
000086*22*39627963 TUM 970122C19.6.0060 R-.0008R NYDT CM4LEICA
000087*22*39627969 TUM 970122C19.7.0064 R.0004 R NYDT CM4LEICA
000088*22*39627972 EDA 990524C20.0.0100 A LEICA CM4LEICA
000089*22*39628233 TUM 970620C20.8.0069 R.0069 R MSAM CM4LEICA
000090*22*39628238 TUM 970620C21.0.0068 R.0063 R MSAM CM4LEICA
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Num Lock
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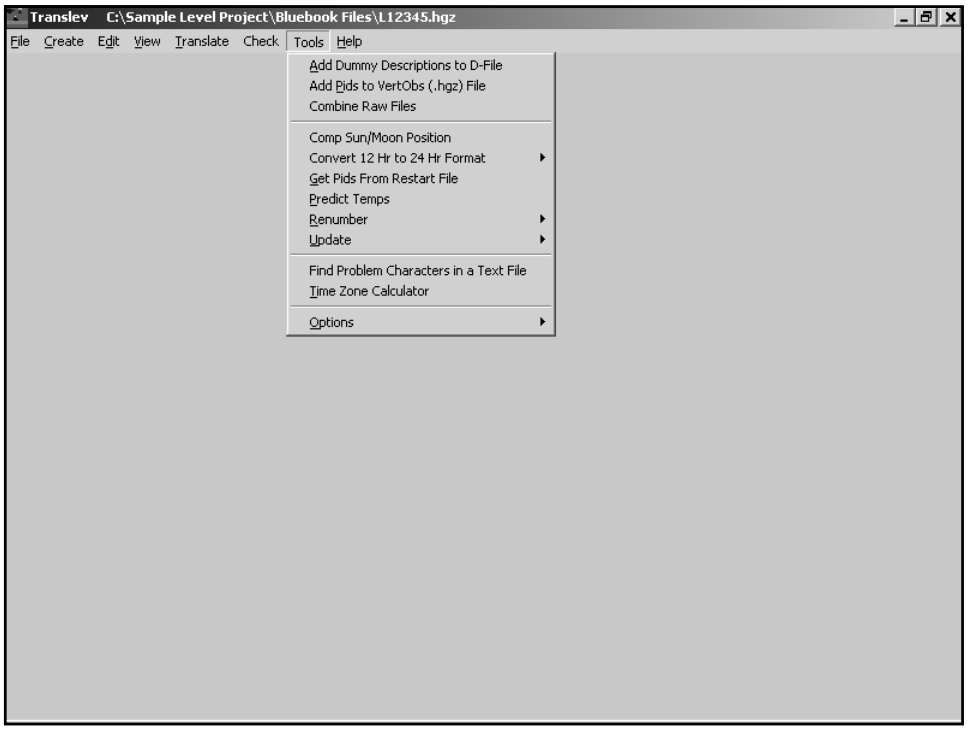

NOAA's National Geodetic Survey Positioning America for the Future
www.ngs.noaa.gov
Rods.dat Editor
Record Type *22* Line No. 000072
NGS Equipment Code (nnn) 396
Rod Serial Number (aaaaaaaa) 27226
Laboratory (aaaaaa) TUM
Date of Standard. (yymmdd) 950906
Temperature Scale (C or F) C
Standardization Temp (nn.n) 20.3
Coef of Exp X 10000 (nnnnnn) .0075
A-Flag (A if assumed) R
Rod Excess X 1000 (nnnnnn) .0010
Index Error (nnnnnn)
Owner (aaaaaa) NGS
Rod Units (aa) CM
Graduation Code (n) 4
Manufacturer (16a) LEICA
Type (12a) INVAR
Okay
Cancel
Overwrite
Num Lock

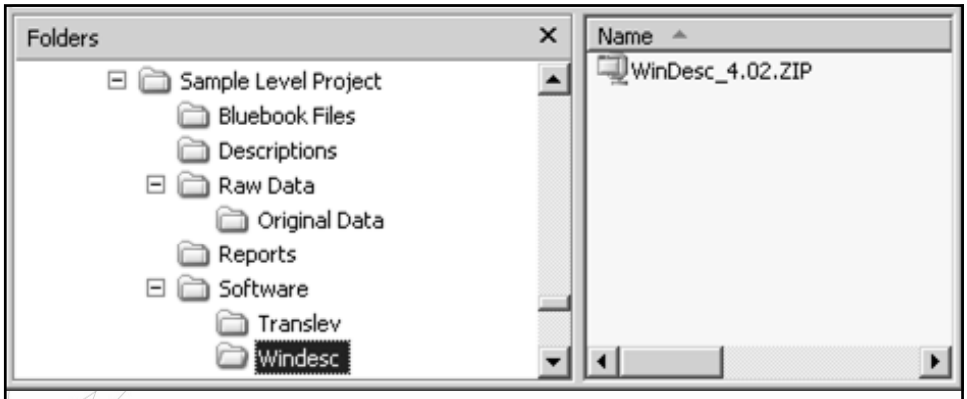
NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

Rods.dat File in Translev Software

Coefficient of Expansion 100 — Rod Excess 1,000 — Index Error (in rod units)

```
000069*22*3S626685   TUM   941104C22.8.0076 R-.0015R       NGS       CM4LEICA      INVAR
000070*22*3S626686   TUM   941104C22.8.0074 R-.0022R       NGS       CM4LEICA      INVAR
000071*22*3S627145   EDA   960725C20.0.0100 A              NCGS      CM4LEICA      INVAR
000072*22*3S627226   TUM   950906C20.3.0075 R.0010 R       NGS       CM4LEICA      INVAR
000073*22*3S627227   TUM   950906C20.3.0076 R-.0015R       NGS       CM4LEICA      INVAR
000074*22*3S627229   TUM   950906C20.7.0081 R-.0009R       NGS       CM4LEICA      INVAR
000075*22*3S627236   TUM   950907C21.0.0079 R.0004 R       NGS       CM4LEICA      INVAR
000076*22*3S627307   EDA   960725C20.0.0100 A              NCGS      CM4LEICA      INVAR
000077*22*3S627450   TUM   960115C20.5.0075 R.0010 R       FLDEF     CM4LEICA      INVAR
000078*22*3S627506   TUM   960228C20.3.0087 R.0042 R       FLDEF     CM4LEICA      INVAR
000079*22*3S627513   TUM   960528C20.5.0073 R-.0028R       MTDOT     CM4LEICA      INVAR
000080*22*3S627514   TUM   960528C20.5.0072 R-.0039R       MTDOT     CM4LEICA      INVAR
000081*22*3S627537   TUM   960322C20.5.0084 R-.0025R       NOSOES    CM4LEICA      INVAR
000082*22*3S627635   TUM   960627C21.3.0071 R.0004 R       CO-OPS    CM4LEICA      INVAR
000083*22*3S627841   TUM   961008C20.7.0070 R.0016 R       SEC       CM4LEICA      INVAR
000084*22*3S627842   TUM   961008C20.5.0074 R.0020 R       SEC       CM4LEICA      INVAR
000085*22*3S627843   EDA   990524C20.0.0100 A              LEICA     CM4LEICA      INVAR
000086*22*3S627963   TUM   970122C19.5.0060 R-.0008R       NYDT      CM4LEICA      INVAR
000087*22*3S627969   TUM   970122C19.7.0064 R.0004 R       NYDT      CM4LEICA      INVAR
000088*22*3S627972   EDA   990524C20.0.0100 A              LEICA     CM4LEICA      INVAR
000089*22*3S628233   TUM   970620C20.8.0069 R.0069 R       MSAM      CM4LEICA      INVAR
000090*22*3S628238   TUM   970620C21.0.0068 R.0063 R       MSAM      CM4LEICA      INVAR
000091*22*3S628582   ULAVAL011107C20.0.0060 A              WOOLFT    CM4LEICA      INVAR
000092*22*3S628589   ULAVAL011107C20.0.0060 A              WOOLFT    CM4LEICA      INVAR
000093*22*3S628793   ULAVAL981126C20.0.0060 A              MDSHA     CM4LEICA      INVAR
000094*22*3S629317   ULAVAL030605C20.0.0060  -.0080R-.0310NJGS       CM4LEICA      INVAR
000095*22*3S629572   EDA   010216C20.0.0100 A              LDBLS     CM4LEICA      INVAR
000096*22*3S629720   EDA   010216C20.0.0100 A              LDBLS     CM4LEICA      INVAR
000097*22*3S629793   EDA   010405C20.0.0100 A              FOST      CM4LEICA      INVAR
```





Levels Project Blue Book Data Structure

Questions?

National Geodetic Survey

Translev Exercise (45/60 minutes)

