



Table of contents

1 introduction	1
Data Collection	1
Digital Levels/BF	1
Optical Levels/BBFF.....	2
Standard Levels/BF	2
Trigonometric Levelling	2
General Characteristics	2
Sorted Data Set	3
Intermediate Sights	3
Double Levelling	3
Editing and Data Formats	4
Utilities	4
Digital Input	5
Methodology	5
Control Records	6
Station Description.....	6
Image Editor	7
Header Information	7
Processing	8
Node Identification.....	8
Loops and Closures	8
Computing.....	9
Management.....	10
Results	10
Monitoring.....	11
Graphical Presentation	11
Profiles	12
Methodology	12
Data Structures	12
Interface	12
Editing	13
Input Modality	13
Cross-Sections	13
Input Formats.....	13
Areas and Volumes.....	13
Graphical Output	14
Working Profile	14
Cross-Section Drawing.....	14
Presentation	15
Reports	15
Quality Assessments	15
Precision of Points.....	15



Table of contents

Precision in Monitoring.....	16
Assessment Parameters	16
Error Analysis.....	16
Computation Analysis	17
Residuals.....	17
Precisions.....	18
Deformation Analysis.....	18
Summary	19
Conclusion	19
2 getting started	20
Hardware	20
Computer	20
Printer	21
Installation.....	21
Memory	22
Program Structure	22
Menu Bar.....	23
Desktop.....	24
Status Line.....	24
On Line Help.....	24
Conclusion	25
3 data collection.....	26
Header Information	26
Sub- Header Information.....	27
Field Book.....	28
Digital Input	30
Conclusion	31
4 computation	32
Control Update.....	32
Processing	33
List of Data Set	34
Controls in Data Set.....	34
Nodes in Data Set	35
Loops in Data Set	35
Notes	36
Computing.....	37
Conclusion	39



Table of contents

5 management	40
Editing	40
Monitoring	41
Notes	44
Adding New Stations	45
Profiles	45
Editing	46
Cross-Section.....	47
Drawing	48
Dredge Quantity	49
Computation	49
Parameters	50
Threshold Value	50
Boundary Edges.....	50
Estimation	51
Interpolation.....	51
Clipping	51
Silt-Exclusion	52
Data Insertion	52
Digital Input	53
The Program.....	53
Interface.....	54
Pre/Post-Survey	55
Post Editor	56
Volume	56
Graphics.....	58
Conclusion.....	58
Reports	58
Document Management	59
File Management	60
Conclusion	61