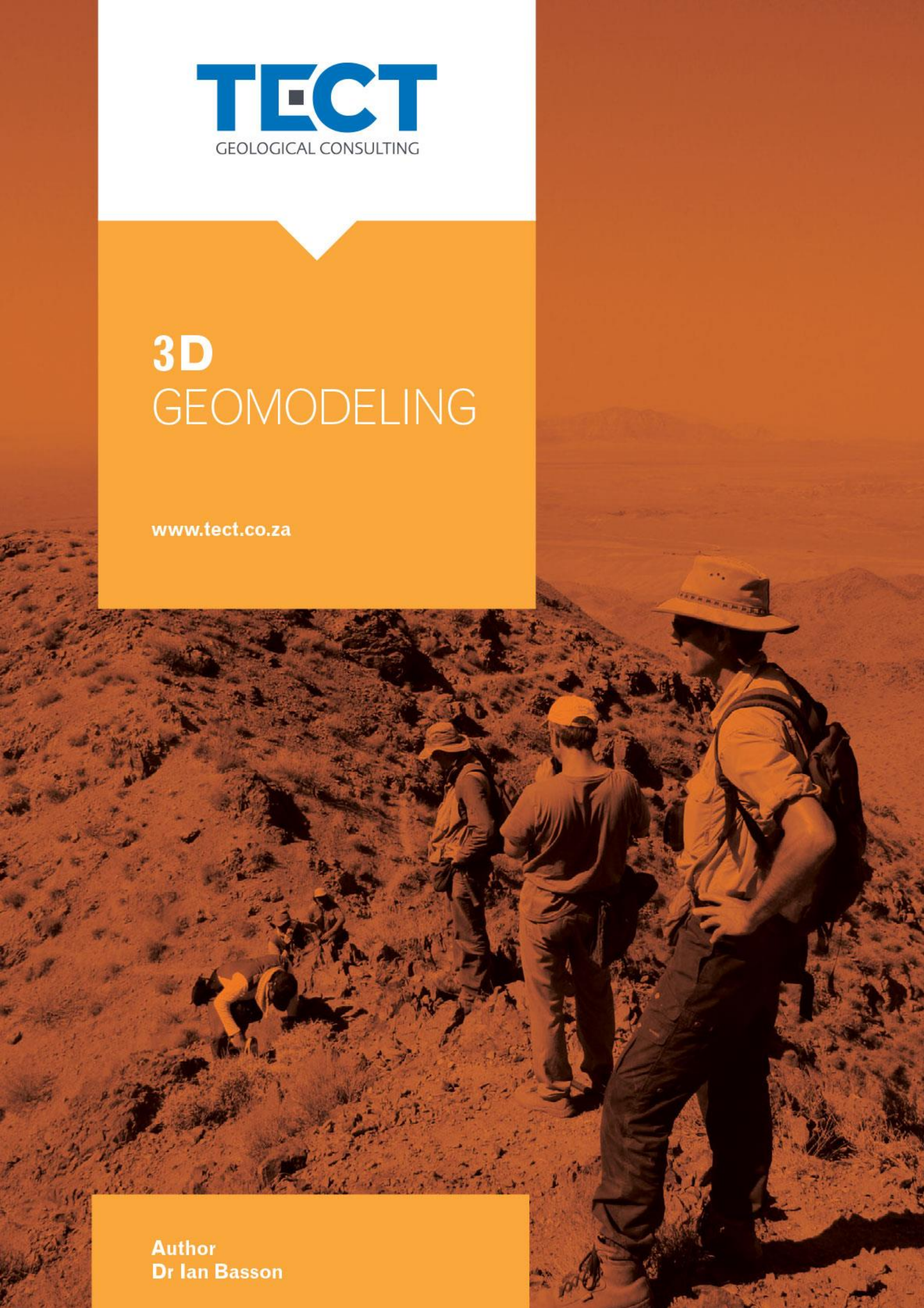


3D GEOMODELING

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Author
Dr Ian Basson



SESSION ONE: Introduction and General Concepts

- Objectives
- The value curve
- Models and dimensions
- 2D to 3D translation
- Exploration models
- Resource estimation models
- Pre-feasibility models
- Bankable feasibility models

SESSION TWO: Choice of Software Package

- Brief history of 3D Geomodelling
- The Shared Earth Model
- General comments on strengths, weaknesses and approaches of various packages
- Framing the problem: what to model?

SESSION THREE: Geometries and Raw Data

- Points
- Lines
- Polylines
- Polygons
- How are data stored?
- Central databases vs Local data stores

SESSION FOUR: Data Types

- Data/Attributes at a point
- Data resolution: accuracy vs precision
- Confidence

SESSION FIVE: Verification vs Validation

- Verification
- Legacy issues
- Validation

SESSION SIX: Drillhole Data

- Components of a drillhole database (DHDB)
- DHDB errors
- Correcting DHDB errors
- Downhole surveying
- Downhole desurveying
- Desurveying algorithms
- Other types of drillhole-based data

SESSION SEVEN: Explicit Modelling

- Surface modelling techniques vs volumes in 3D space
- Cross-sections
- Delaunay triangulation
- Manual triangulation
- Clipping and intersecting

SESSION EIGHT: Implicit Modelling

- Surface modelling techniques:
 - Explicit modelling
 - Manual triangulation
 - Section-based digitization
 - Nearest neighbour
 - Inverse distance
 - Kriging
 - Laplace gridding
- Radial basis functions
- Thin plate spline gridding
- Delaunay triangulation method vs TPS/RBF
- Gridding methods
- Clipping using any surface

SESSION NINE: Implicit Modelling

- Attribute modelling
 - Creating points
 - Troubleshooting

SESSION TEN: Implicit Modelling

- Conditional geometrical modelling
- Basic concepts
- Creating a geological model
- Surfaces
- Strategy
- Deposits
- Intrusion
- Veins
- Editing surfaces
- Surface chronology
- Output volumes
- Advantages of rules-based implicit modelling

SESSION ELEVEN: Modelling of Structures

- Regional structural overview
- Main structural orientations
- Local structural interpretation
- Low-angle structures
- High-angle structures
- Cross-cutting relationships
- Gridding process
- Structural scaffolding
- Rating
- Ranking
- Sub-domaining

SESSION TWELVE: Model Validation

- Output validation definition
- Output validation importance
- Volume/solid validation
- Stereonet-based/structural validation
- Visual validation

SESSION THIRTEEN: Use of Validated Models

- Geotechnical design process
- Using model geometry
- Methodology: better definition of design sectors

SESSION FOURTEEN: Inversion and Targeting

- Simplistic explanation of geophysical inversion
- Isoshells
- Unconstrained inversion
- 3D spatial querying and analysis

SESSION FIFTEEN: Software Packages Reprise

- General
- Datamine
- Gemcom
- Surpac
- Vulcan
- Minesight
- GoCAD
- 2/3D Move
- Micromine
- Leapfrog
- 3D geomodelling scenarios

SESSION SIXTEEN: Summary and Wrap-Up

- How would one approach any 3D modelling package?
- What makes a good 3D modelling package?
- Summary
- Cutting-edge developments and technology