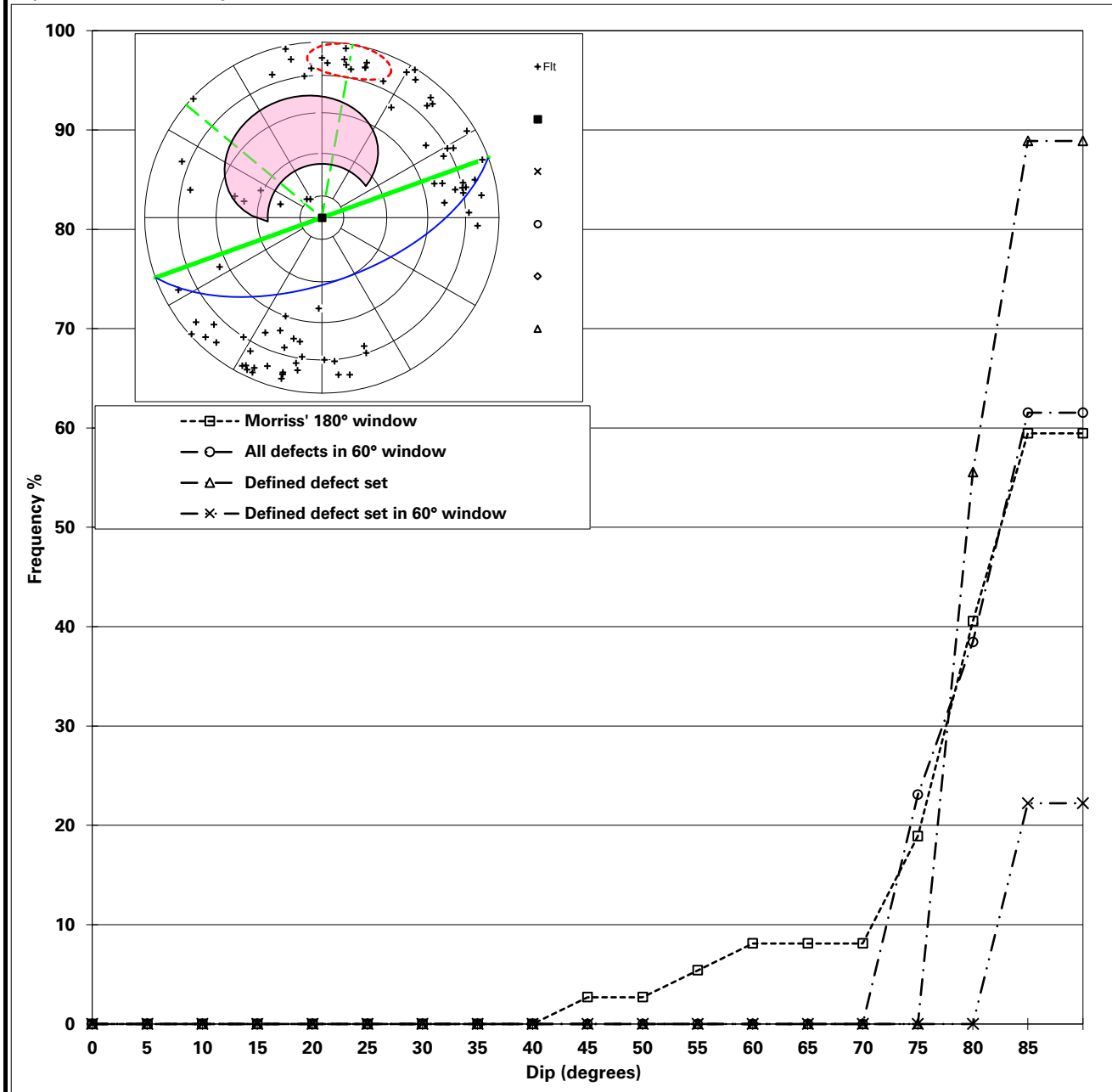


PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 160
Kinematic Window $\pm$ 30

DEFECT SET

FT7	Mean	$\pm$
Dip	80	10
Dip Direction	190	15

DEFECT SHEAR STRENGTHS

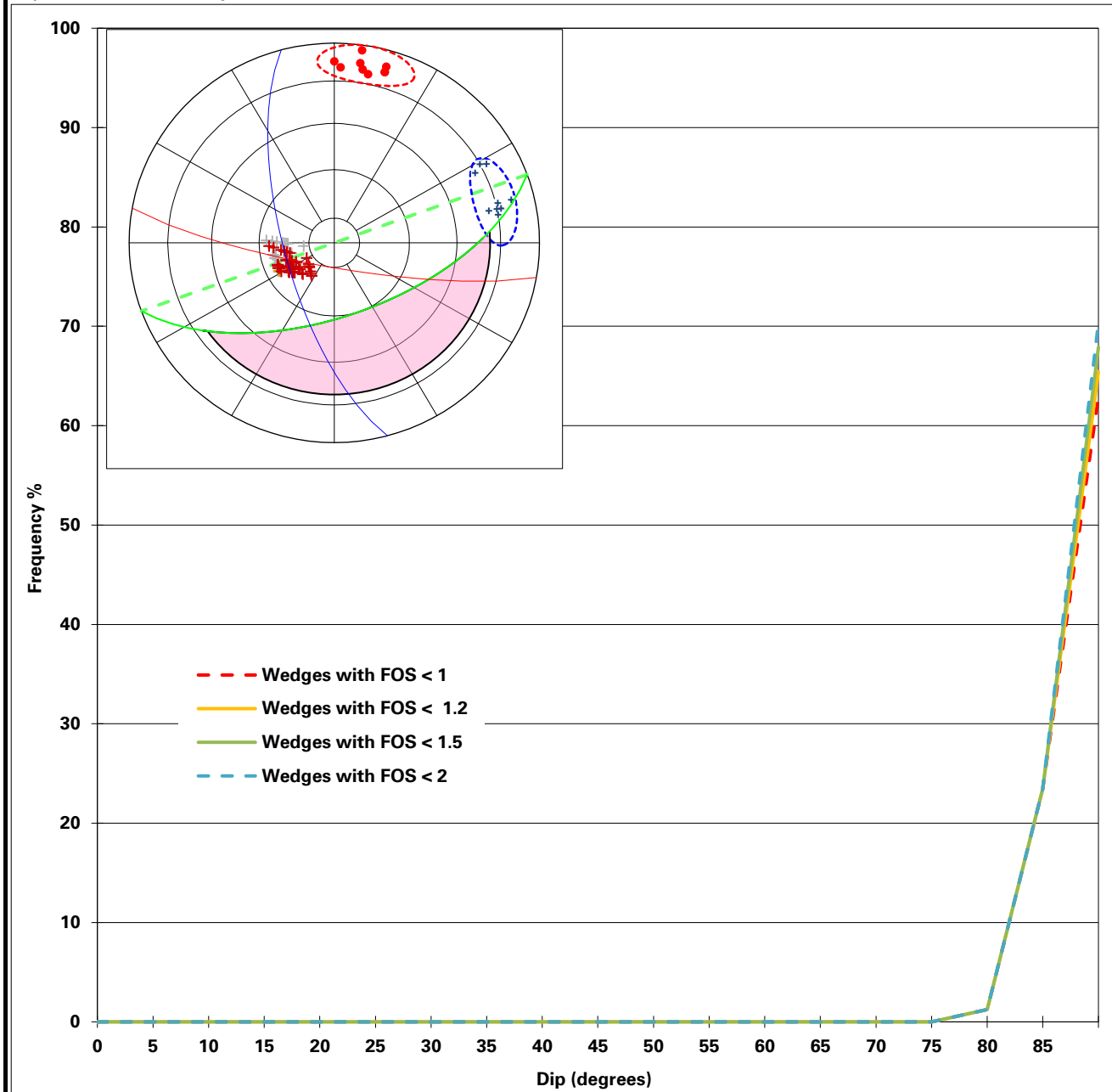
Cohesion = 0 kPa
Friction Angle = 25°

Defects in kinematic window	11
Defects in set FT7	9
Defect in set & window	5
Defects Dipping out of Slope	34



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 160

FIRST SET - RED

FT7	Mean	±
Dip	80	10
Dip Direction	190	15

Defects in set FT7

9

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

FT6	Mean	±
Dip	70	10
Dip Direction	255	15

Defects in set FT6

9

Number of Unstable Wedges 52
Number of Wedges Analysed 81

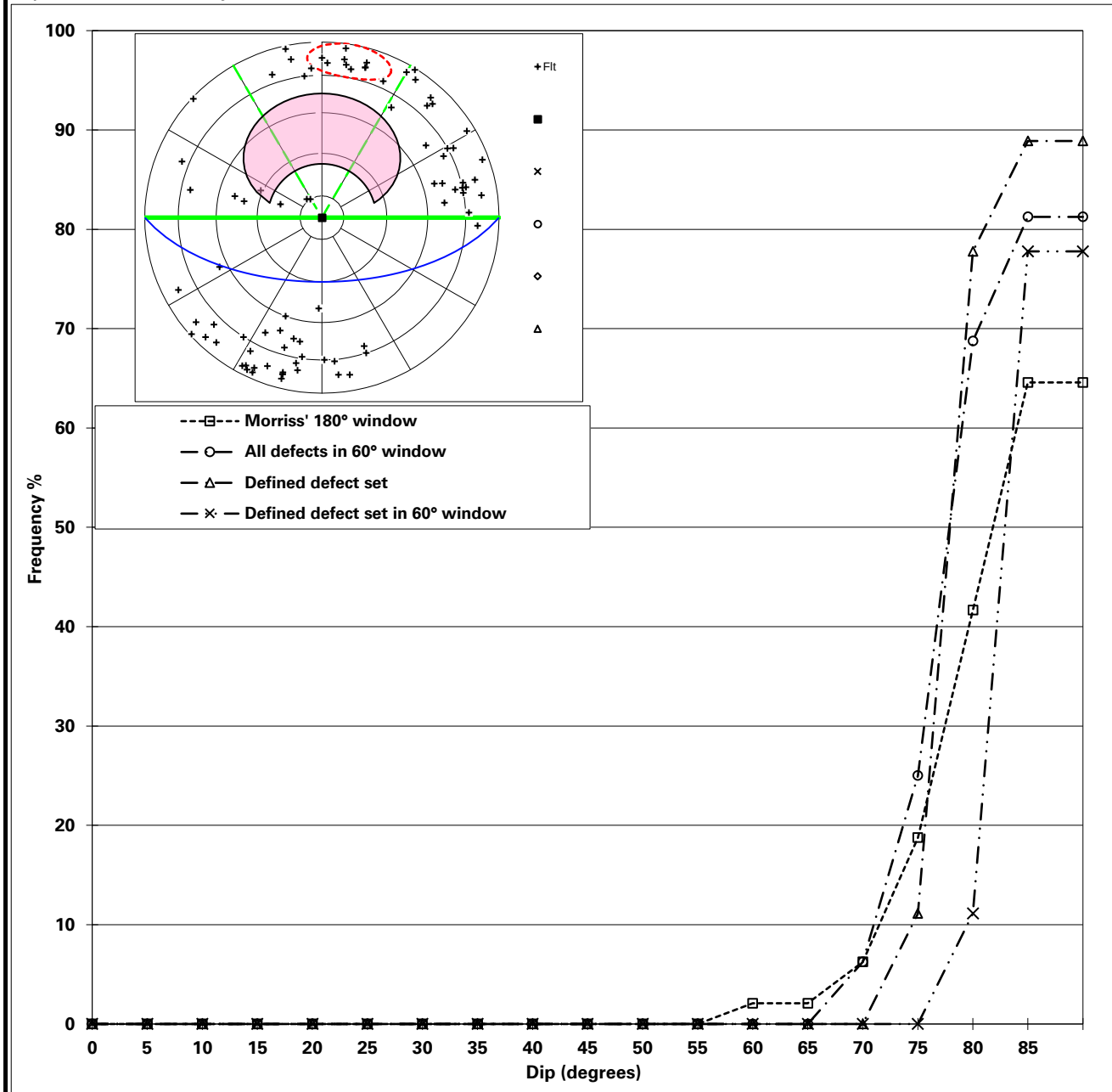
From a possible Total Number of

81



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 180
Kinematic Window $\pm$ 30

DEFECT SET

FT7	Mean	$\pm$
Dip	80	10
Dip Direction	190	15

DEFECT SHEAR STRENGTHS

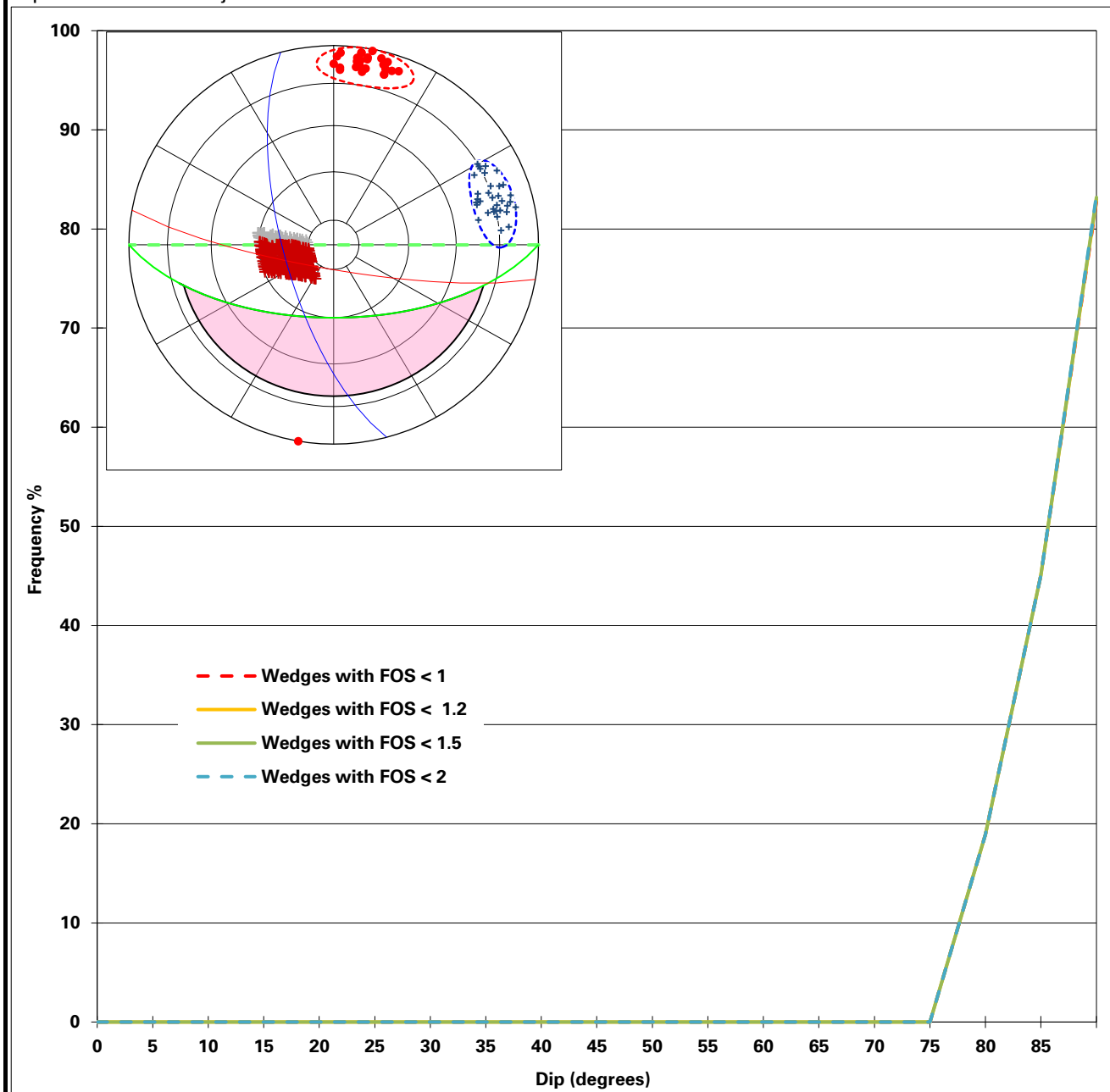
Cohesion = 0 kPa
Friction Angle = 25°

Defects in kinematic window 16
Defects in set FT7 9
Defect in set & window 9
Defects Dipping out of Slope 45



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 180

FIRST SET - RED

TV7	Mean	±
Dip	80	10
Dip Direction	190	15

Defects in set FT7 28

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

TV6	Mean	±
Dip	70	10
Dip Direction	255	15

Defects in set FT6 34

Number of Unstable Wedges 789
Number of Wedges Analysed 952

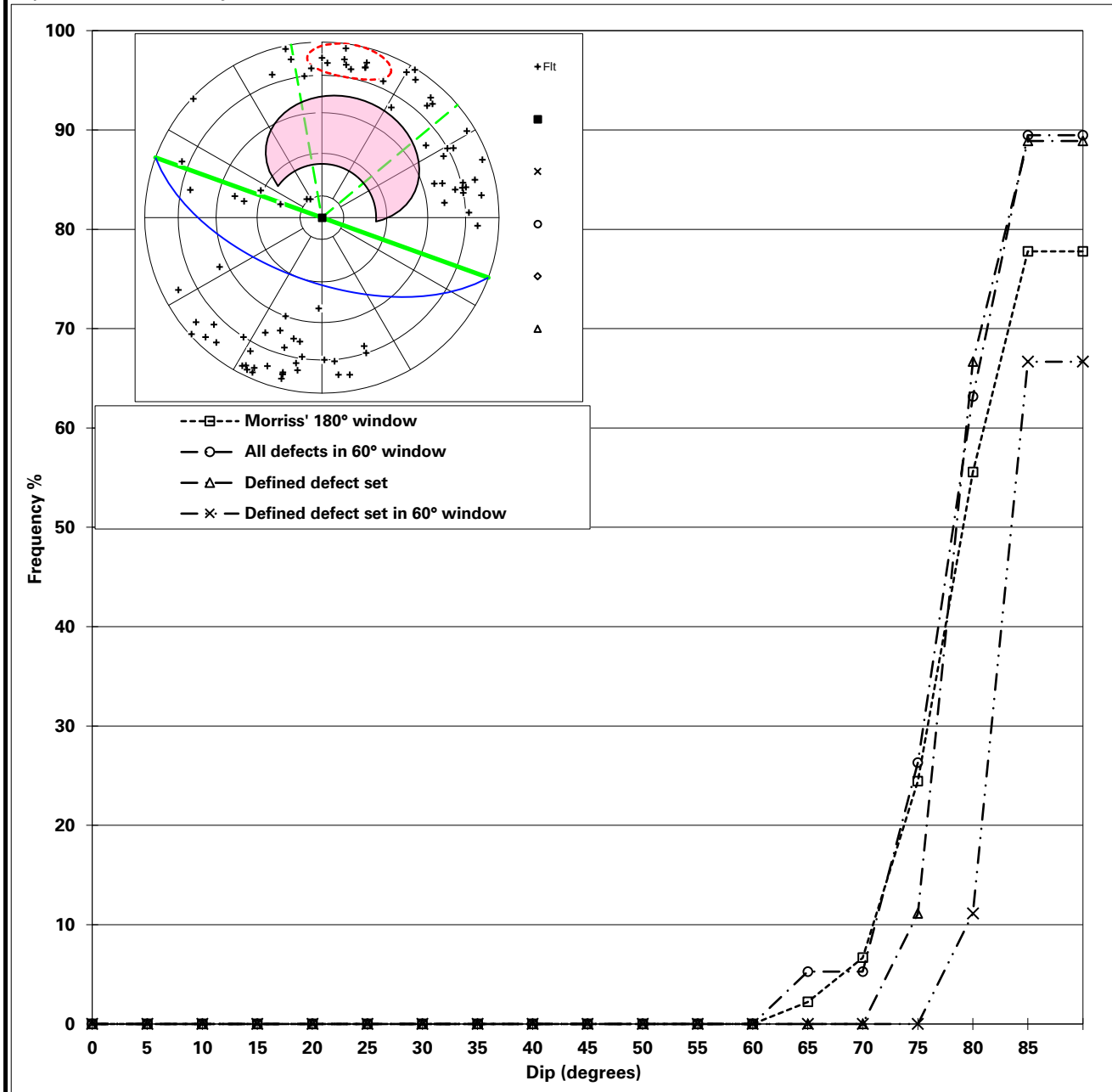
From a possible Total Number of

952



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 200
Kinematic Window ± 30

DEFECT SET

FT7	Mean	±
Dip	80	10
Dip Direction	190	15

DEFECT SHEAR STRENGTHS

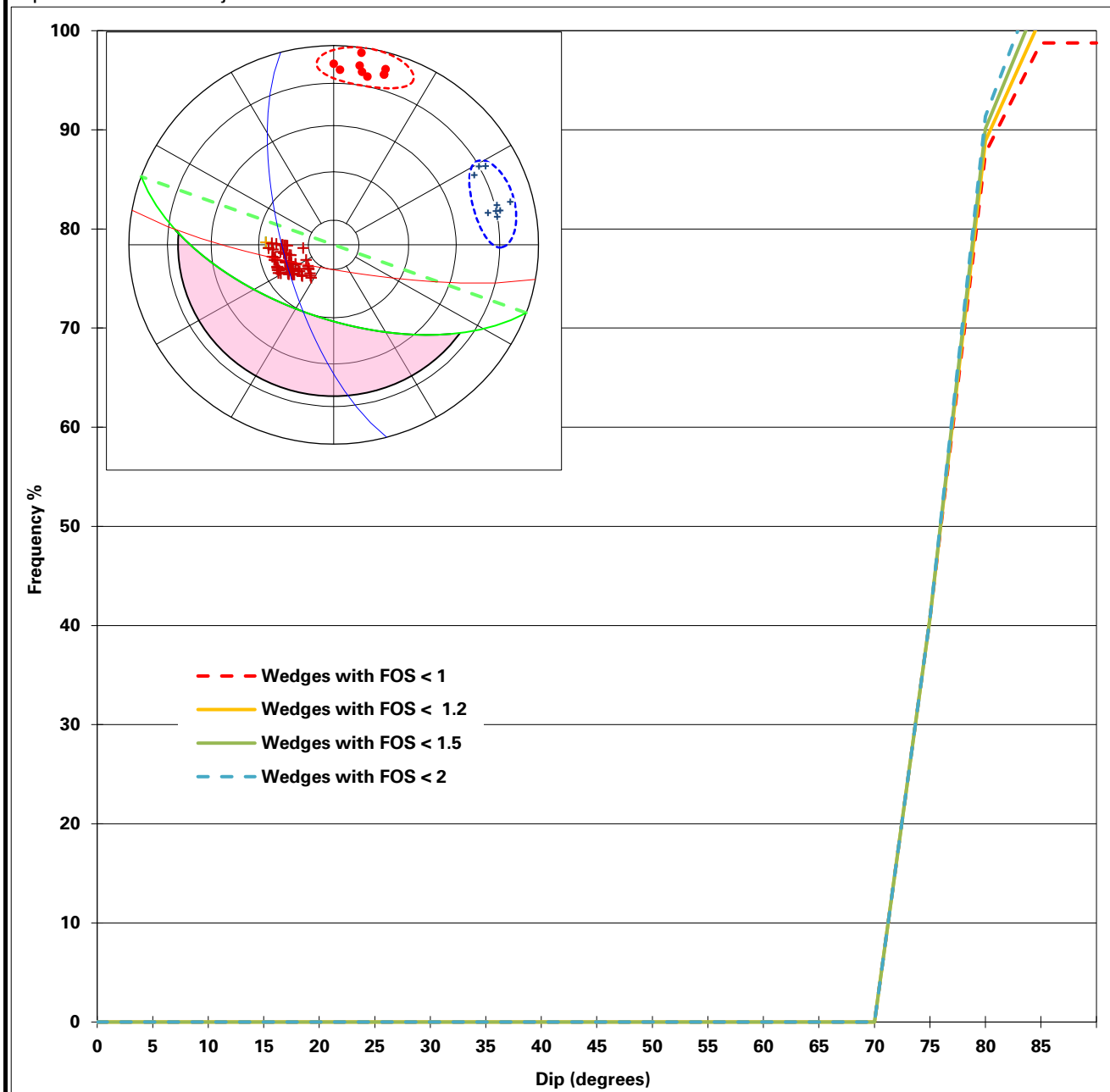
Cohesion = 0 kPa
Friction Angle = 25°

Defects in kinematic window	19
Defects in set FT7	9
Defect in set & window	9
Defects Dipping out of Slope	43



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 200

FIRST SET - RED

FT7	Mean	±
Dip	80	10
Dip Direction	190	15

Defects in set FT7

9

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

FT6	Mean	±
Dip	70	10
Dip Direction	255	15

Defects in set FT6

9

Number of Unstable Wedges 81
Number of Wedges Analysed 81

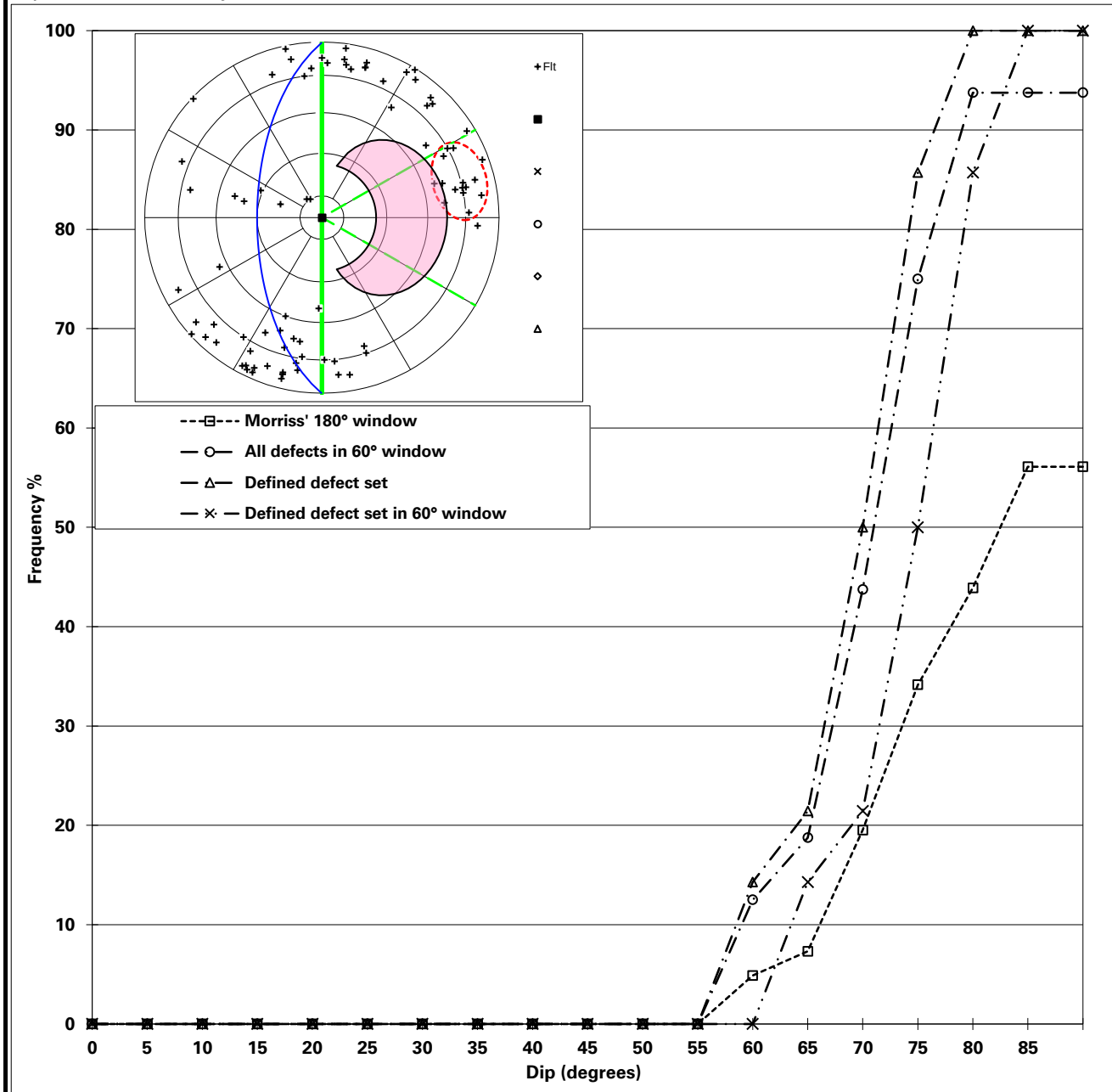
From a possible Total Number of

81



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 270
Kinematic Window ± 30

DEFECT SET

FT6	Mean	±
Dip	70	15
Dip Direction	255	15

DEFECT SHEAR STRENGTHS

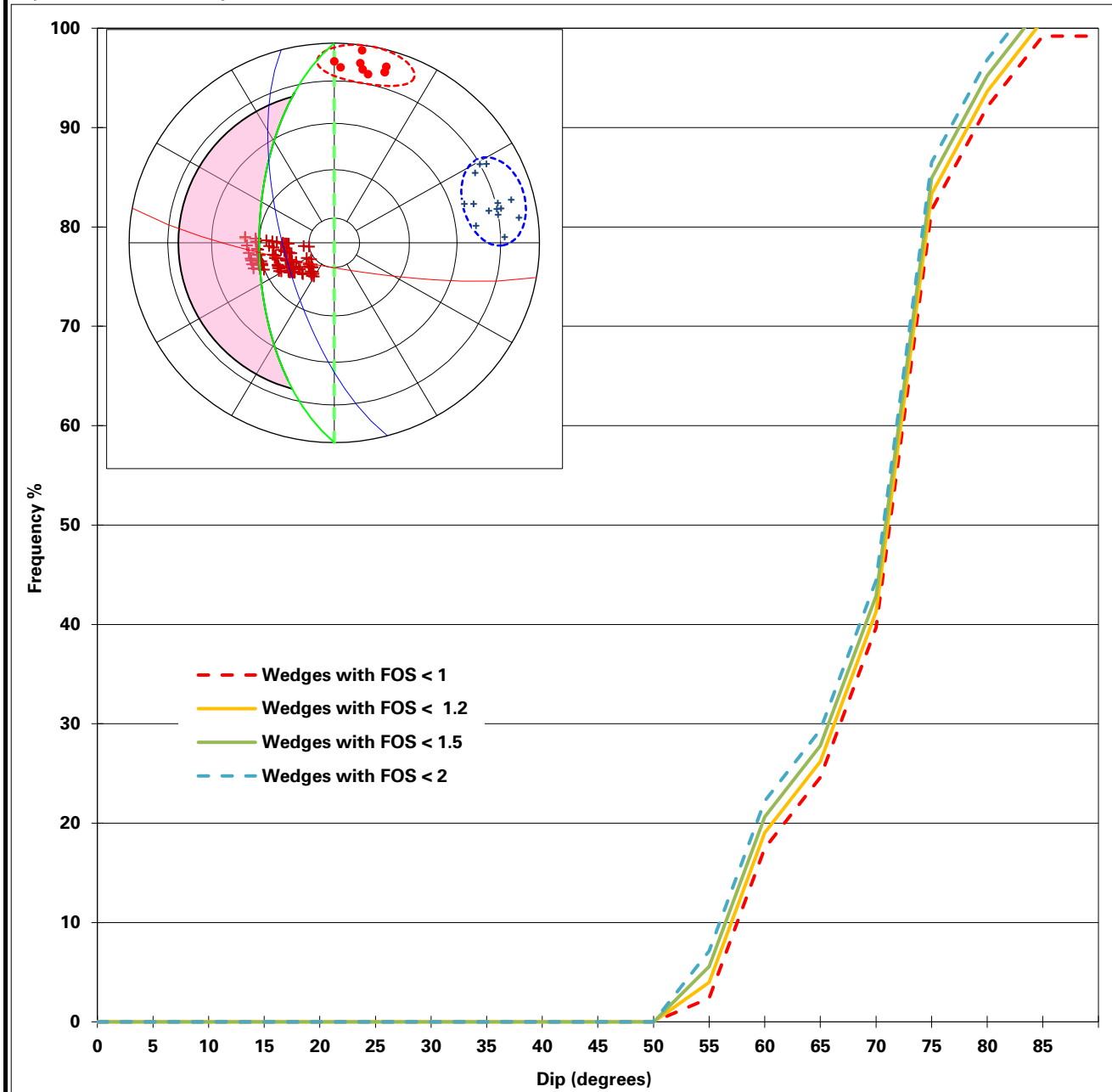
Cohesion = 0 kPa
Friction Angle = 25°

Defects in kinematic window	16
Defects in set FT6	14
Defect in set & window	14
Defects Dipping out of Slope	41



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 270

FIRST SET - RED

FT7	Mean	±
Dip	80	10
Dip Direction	190	15

Defects in set FT7

9

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

FT6	Mean	±
Dip	70	15
Dip Direction	255	15

Defects in set FT6

14

Number of Unstable Wedges 126
Number of Wedges Analysed 126

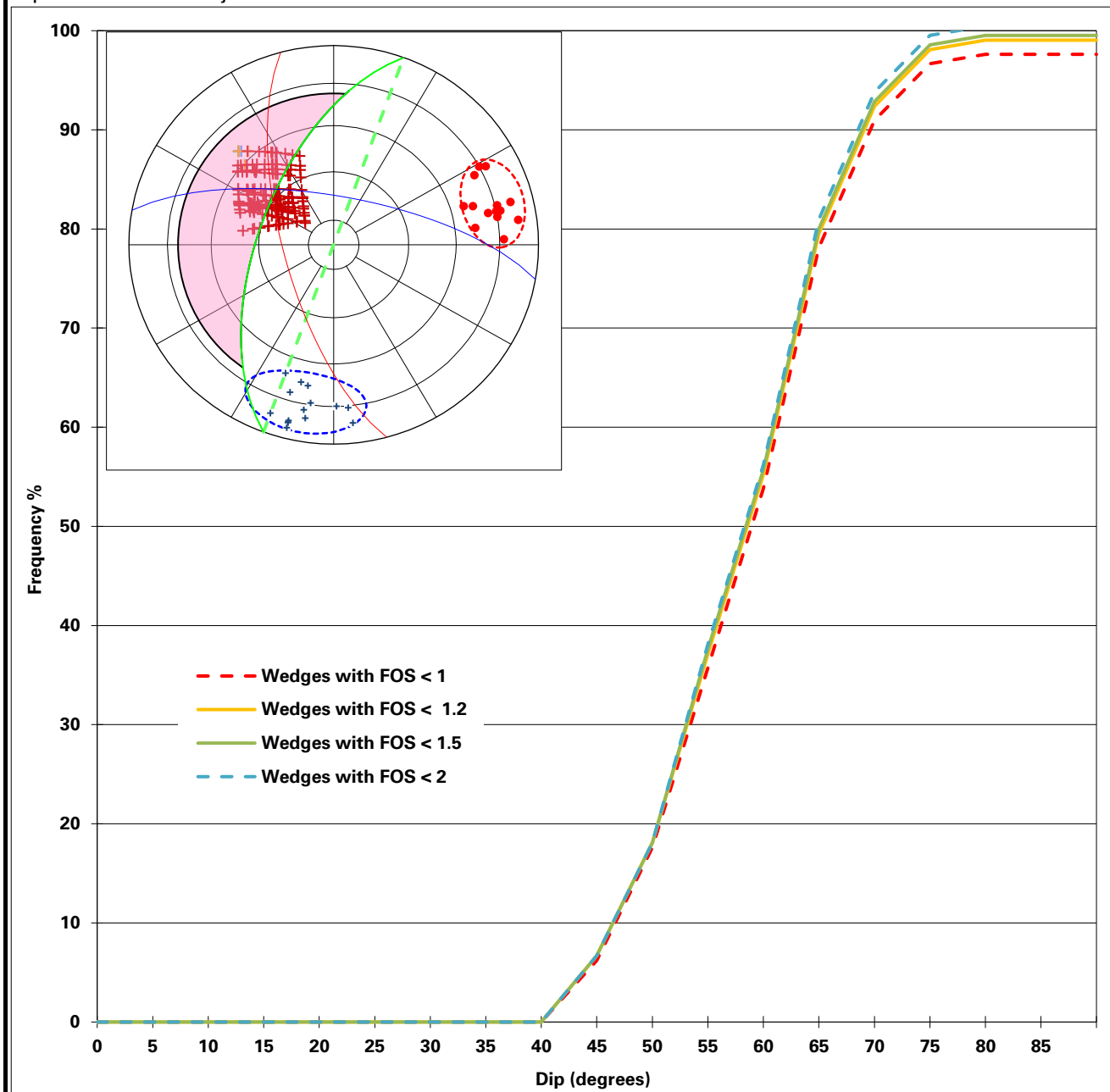
From a possible Total Number of

126



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 290

FIRST SET - RED

FT6	Mean	±
Dip	70	15
Dip Direction	255	15

Defects in set FT6 14

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

FT8	Mean	±
Dip	70	15
Dip Direction	10	20

Defects in set FT8 15

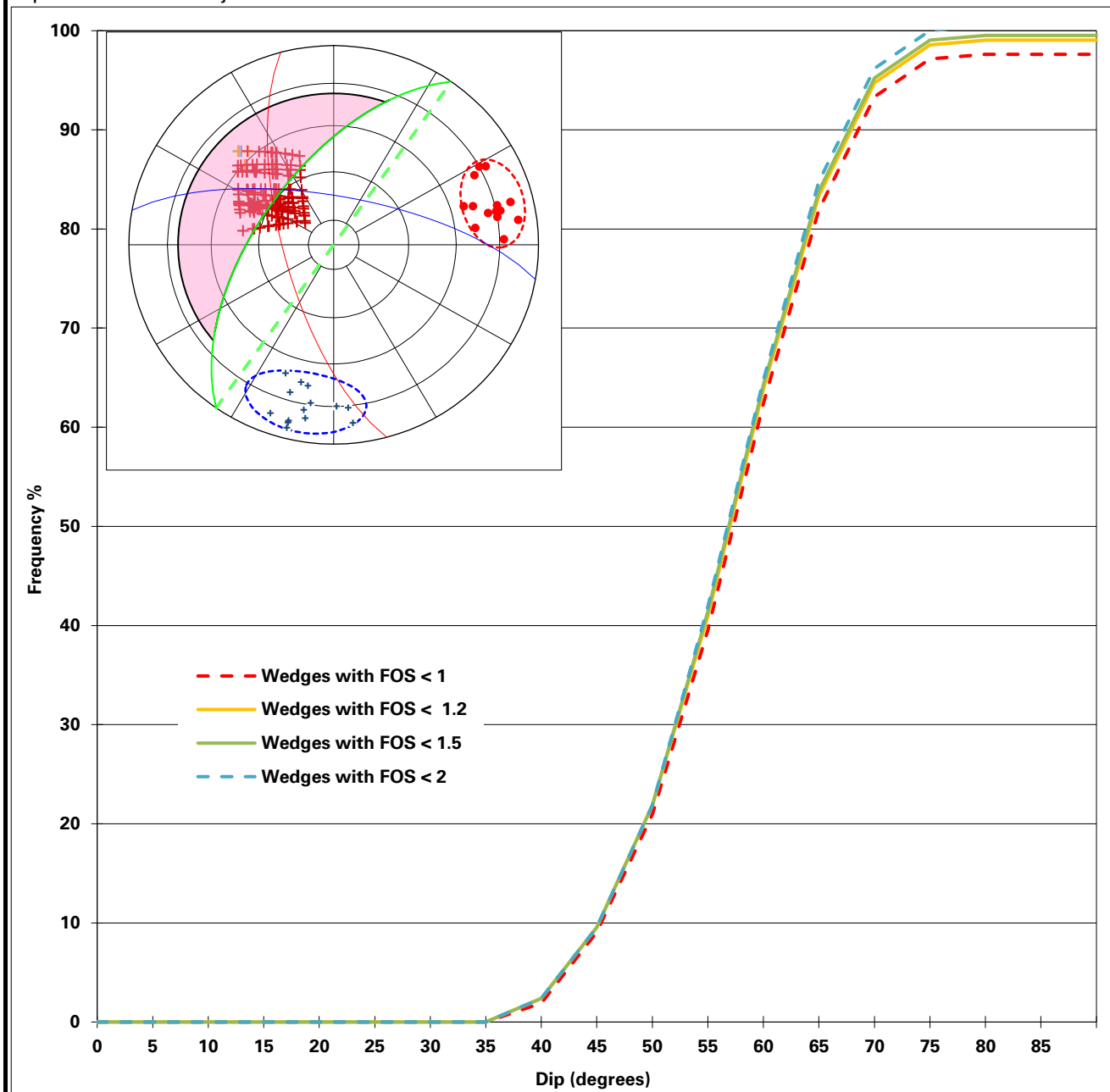
Number of Unstable Wedges 206
Number of Wedges Analysed 210

From a possible Total Number of 210



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 305

FIRST SET - RED

FT6	Mean	±
Dip	70	15
Dip Direction	255	15

Defects in set FT6 14

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

FT8	Mean	±
Dip	70	15
Dip Direction	10	20

Defects in set FT8 15

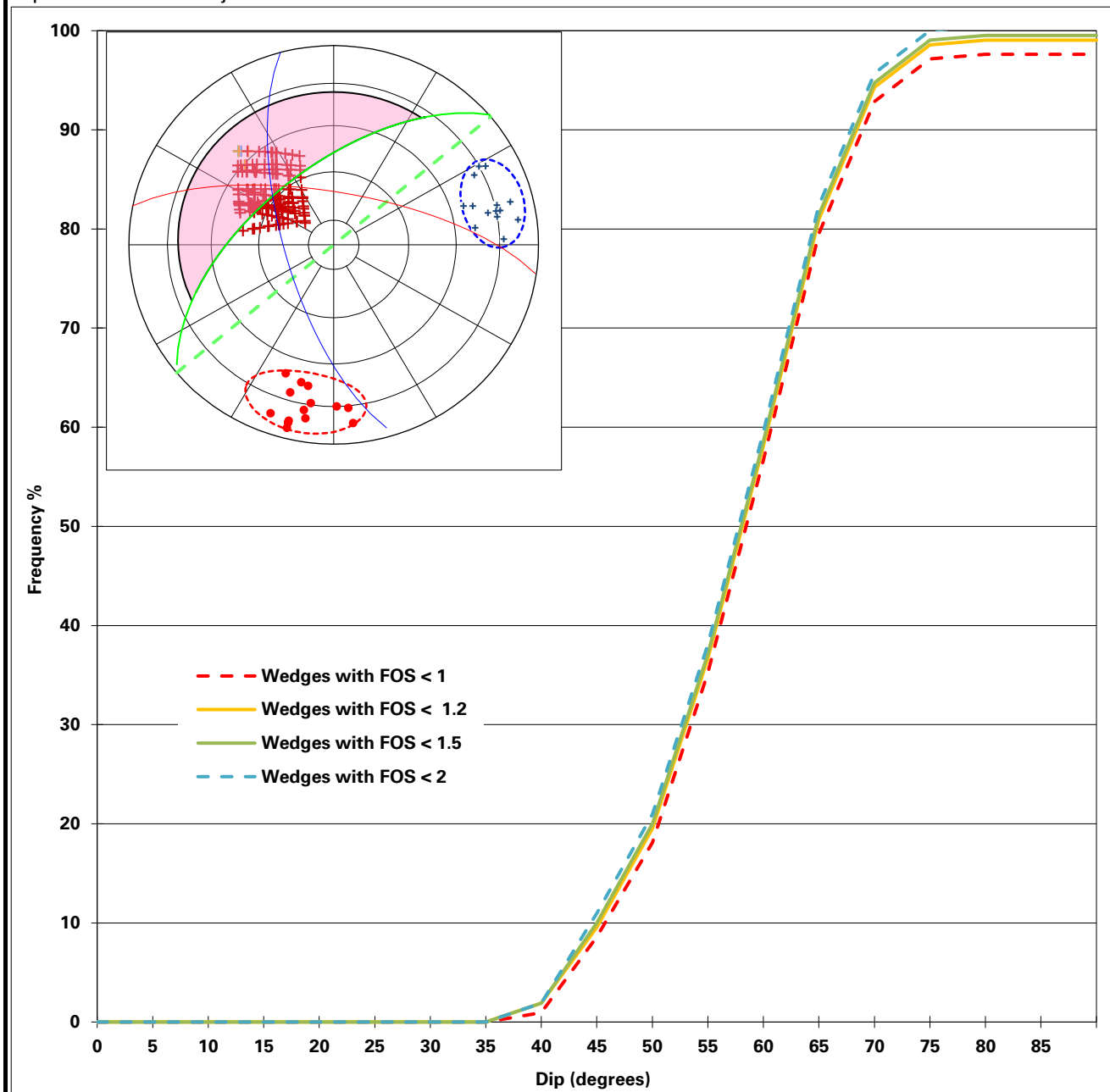
Number of Unstable Wedges 206
Number of Wedges Analysed 210

From a possible Total Number of 210



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 320

FIRST SET - RED

TV8	Mean	±
Dip	70	15
Dip Direction	10	20

Defects in set FT8 15

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 25°

SECOND SET - BLUE

TV6	Mean	±
Dip	70	15
Dip Direction	255	15

Defects in set FT6 14

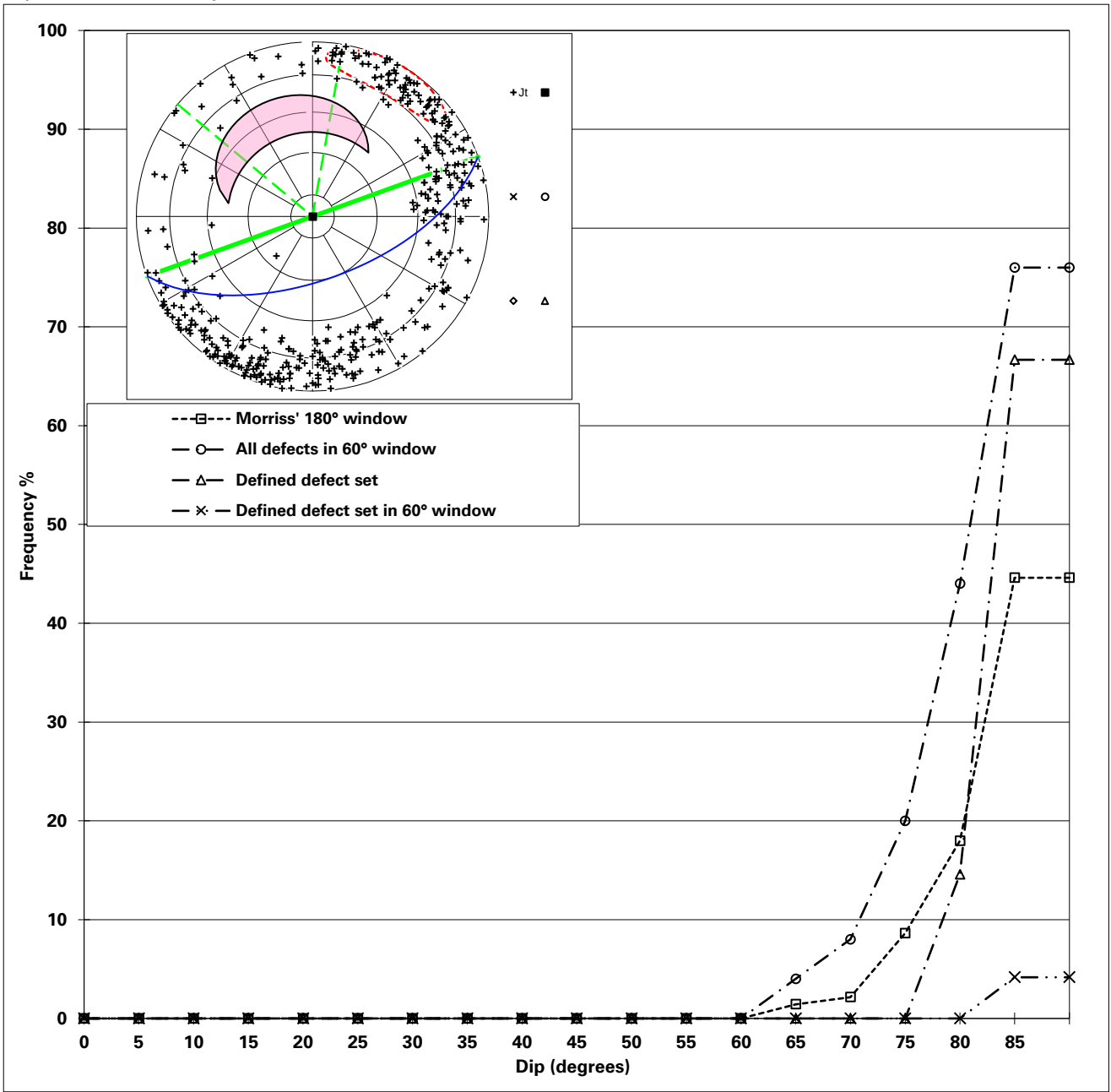
Number of Unstable Wedges 206
Number of Wedges Analysed 210

From a possible Total Number of 210



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 160
Kinematic Window ± 30

DEFECT SET

JT3	Mean	±
Dip	80	10
Dip Direction	210	25

DEFECT SHEAR STRENGTHS

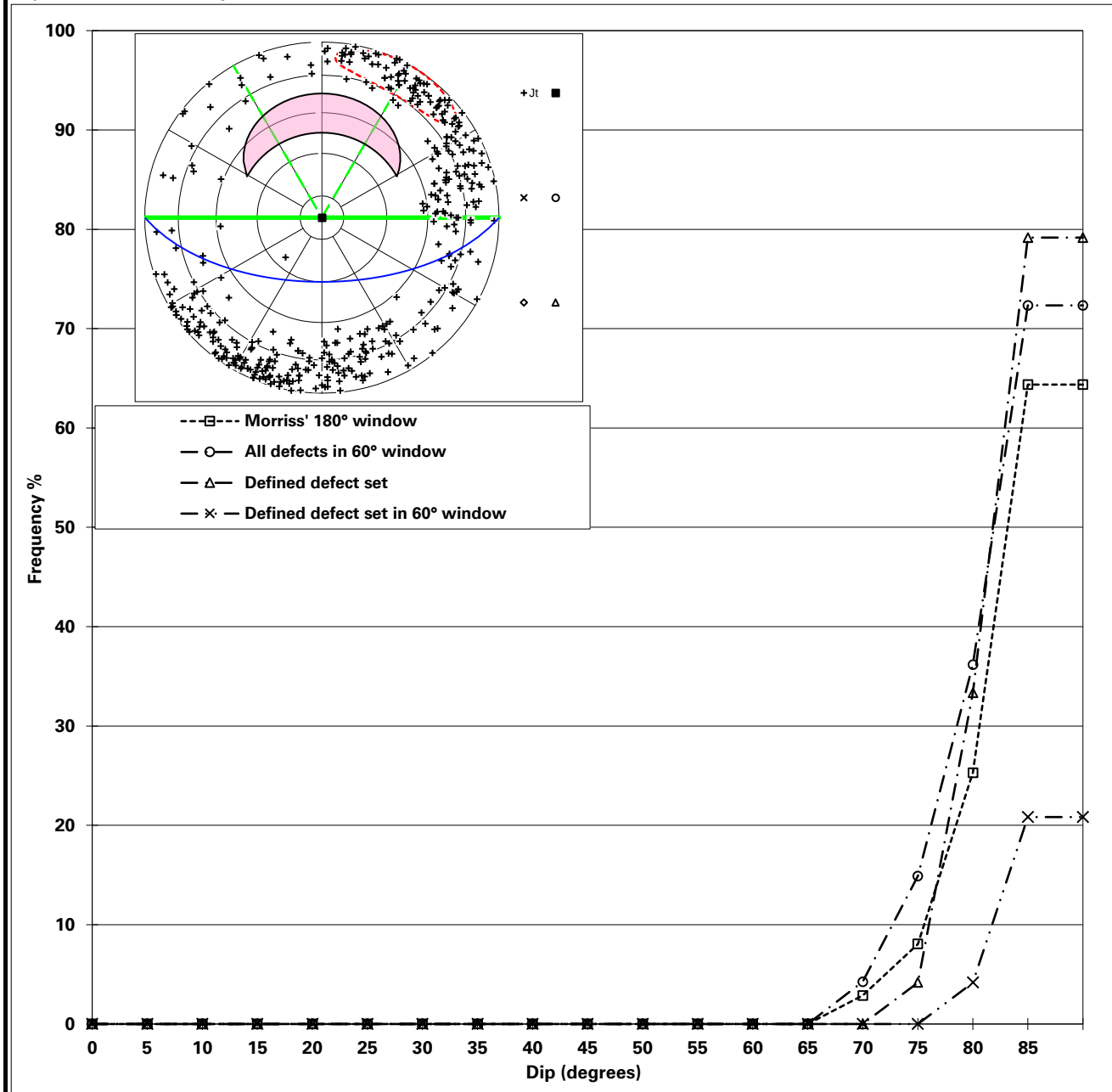
Cohesion = 0 kPa
Friction Angle = 40°

Defects in kinematic window	25
Defects in set JT3	48
Defect in set & window	8
Defects Dipping out of Slope	139



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 180
Kinematic Window $\pm$ 30

DEFECT SET

JT3	Mean	$\pm$
Dip	80	10
Dip Direction	210	25

DEFECT SHEAR STRENGTHS

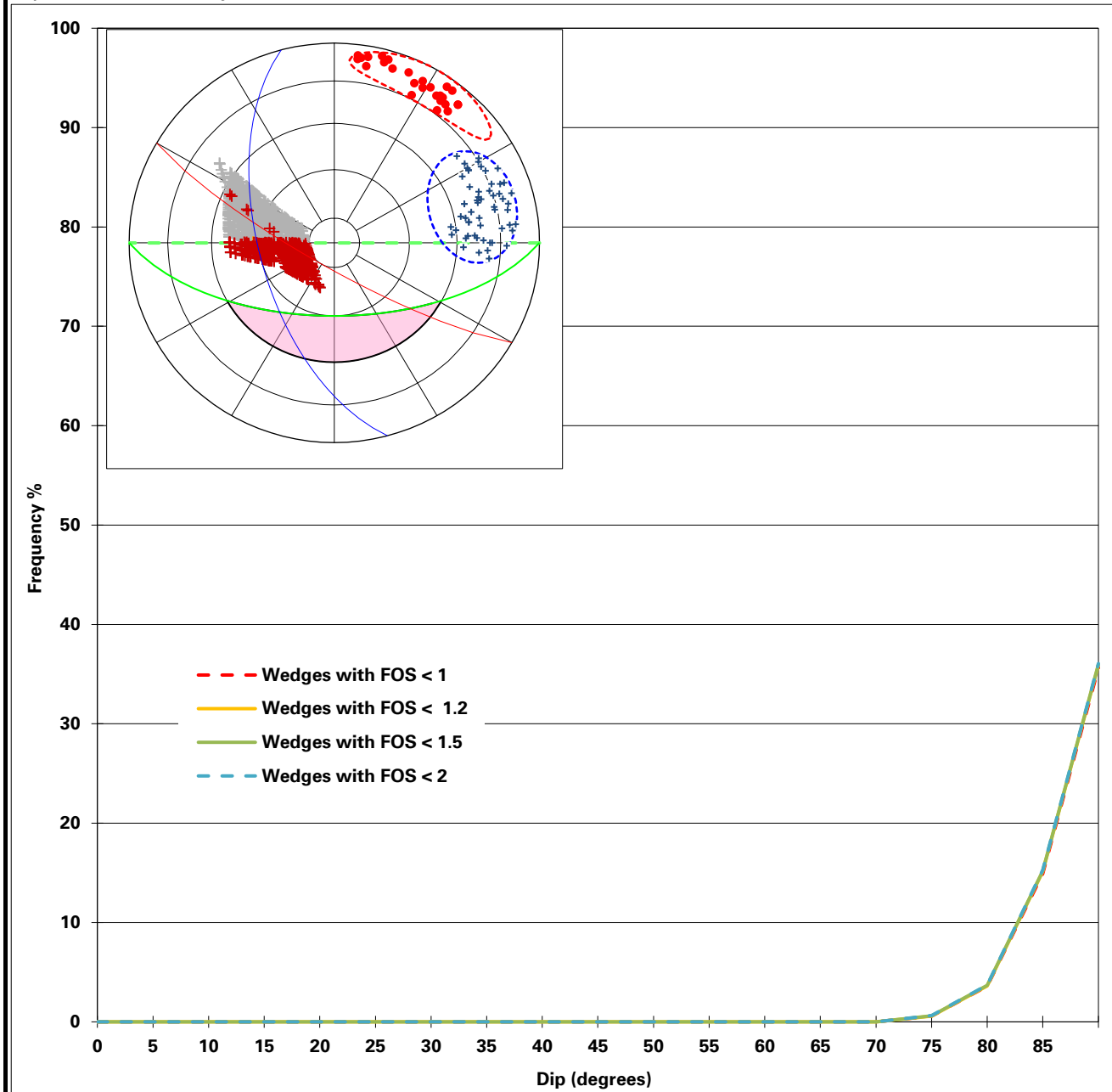
Cohesion = 0 kPa
Friction Angle = 40°

Defects in kinematic window	47
Defects in set JT3	48
Defect in set & window	30
Defects Dipping out of Slope	174



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 180

FIRST SET - RED

JT3	Mean	±
Dip	80	10
Dip Direction	210	25

Defects in set JT3 48

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 40°

SECOND SET - BLUE

JT4	Mean	±
Dip	60	20
Dip Direction	255	20

Defects in set JT4 58

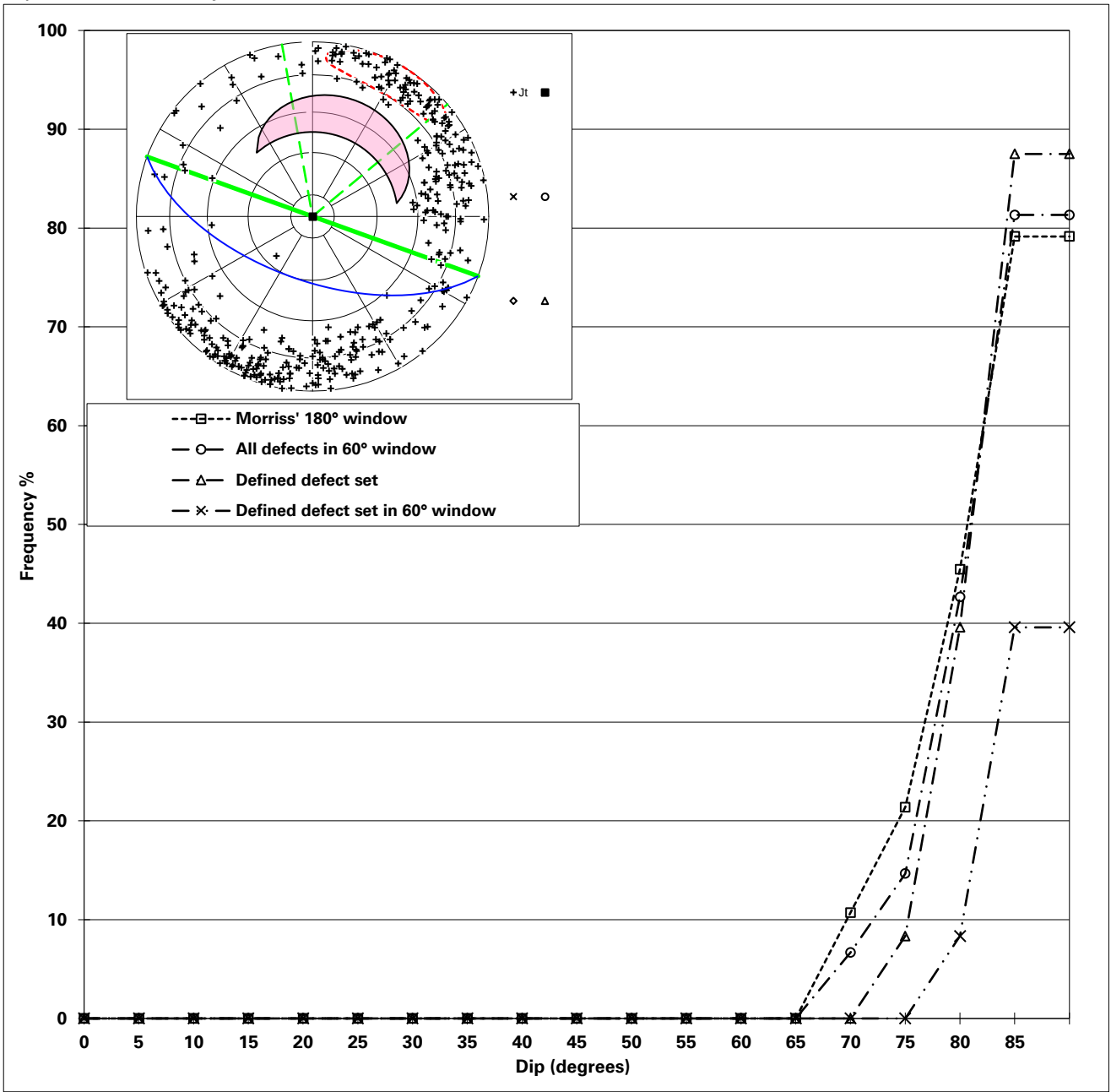
Number of Unstable Wedges 993
Number of Wedges Analysed 2784

From a possible Total Number of 2784



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 200
Kinematic Window ± 30

DEFECT SET

JT3	Mean	±
Dip	80	10
Dip Direction	210	25

DEFECT SHEAR STRENGTHS

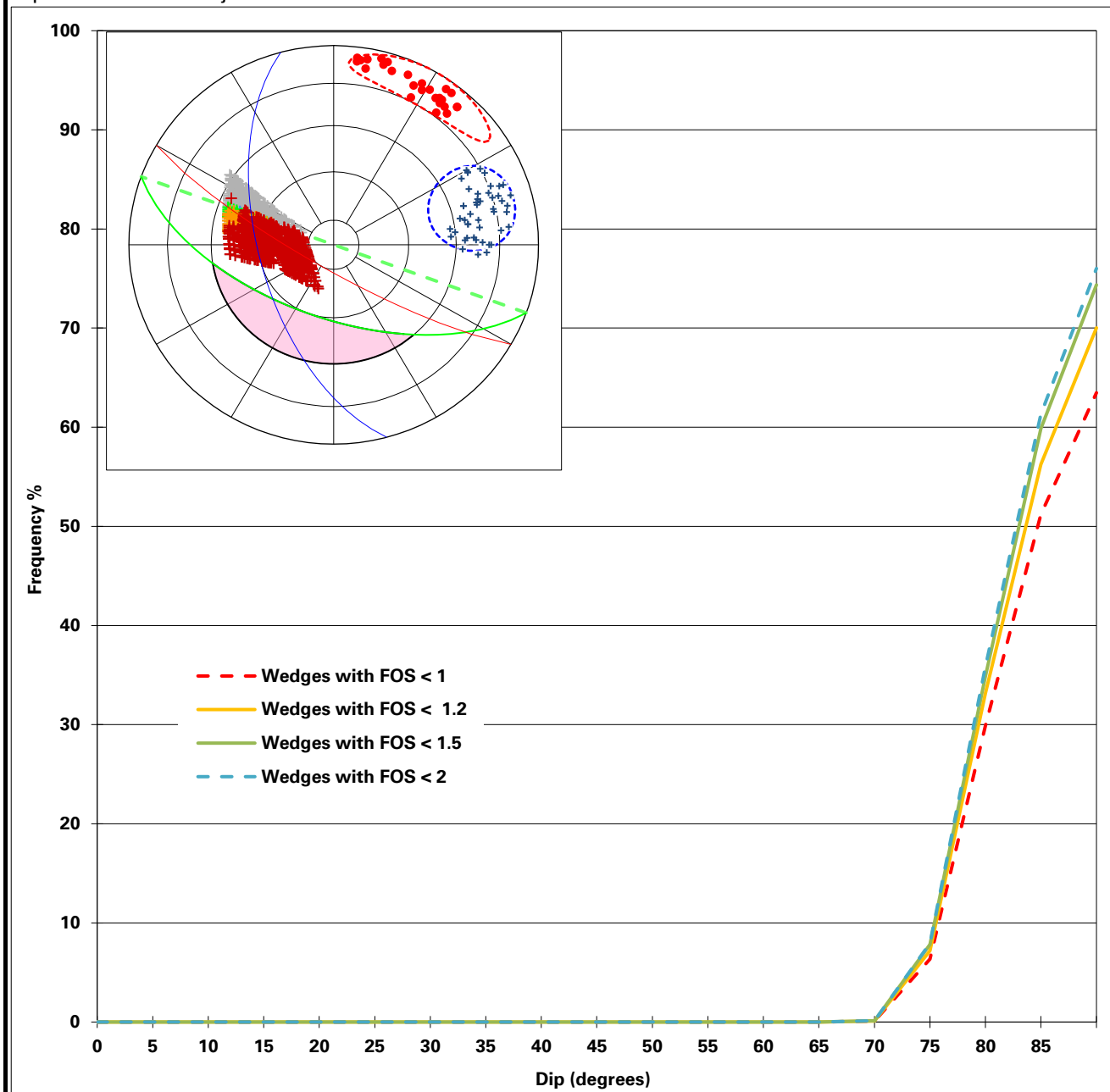
Cohesion = 0 kPa
Friction Angle = 40°

Defects in kinematic window	75
Defects in set JT3	48
Defect in set & window	48
Defects Dipping out of Slope	187



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 200

FIRST SET - RED

JT3	Mean	±
Dip	80	10
Dip Direction	210	25

Defects in set JT3 48

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 40°

SECOND SET - BLUE

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

Defects in set JT4 49

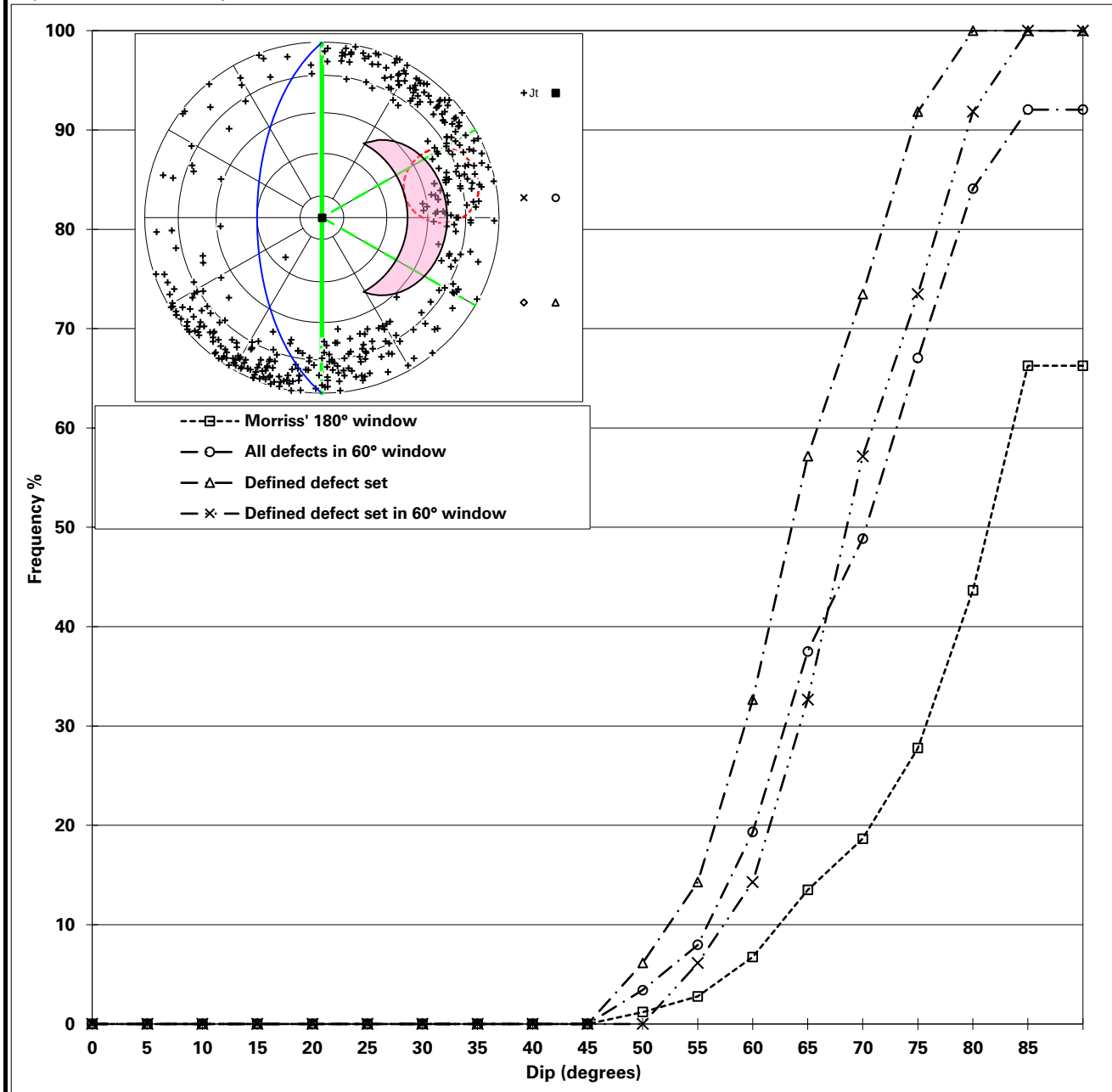
Number of Unstable Wedges 1494
Number of Wedges Analysed 2352

From a possible Total Number of 2352



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 270
Kinematic Window ± 30

DEFECT SET

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

DEFECT SHEAR STRENGTHS

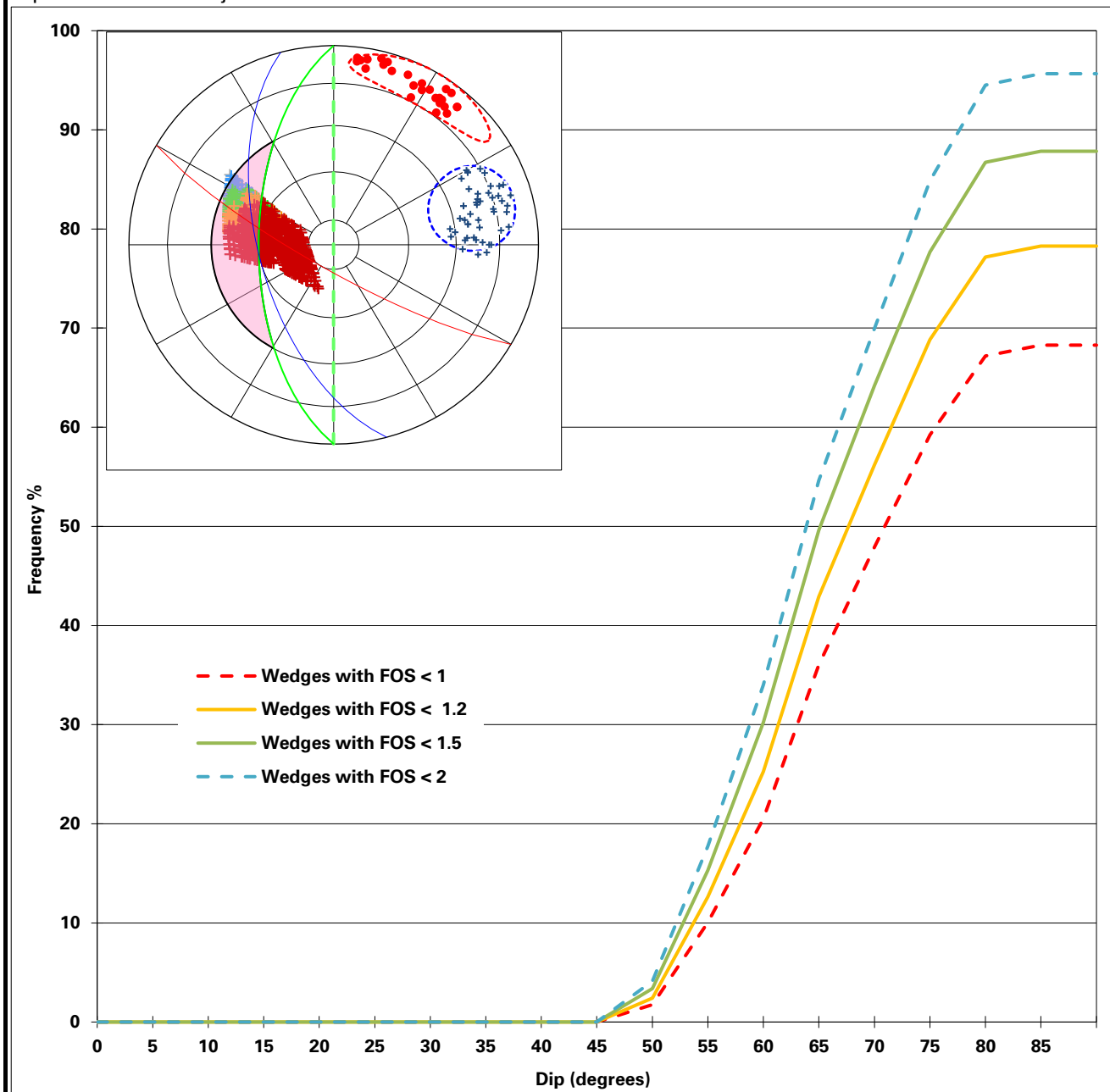
Cohesion = 0 kPa
Friction Angle = 40°

Defects in kinematic window 88
Defects in set JT4 49
Defect in set & window 49
Defects Dipping out of Slope 252



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 270

FIRST SET - RED

JT3	Mean	±
Dip	80	10
Dip Direction	210	25

Defects in set JT3 48

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 40°

SECOND SET - BLUE

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

Defects in set JT4 49

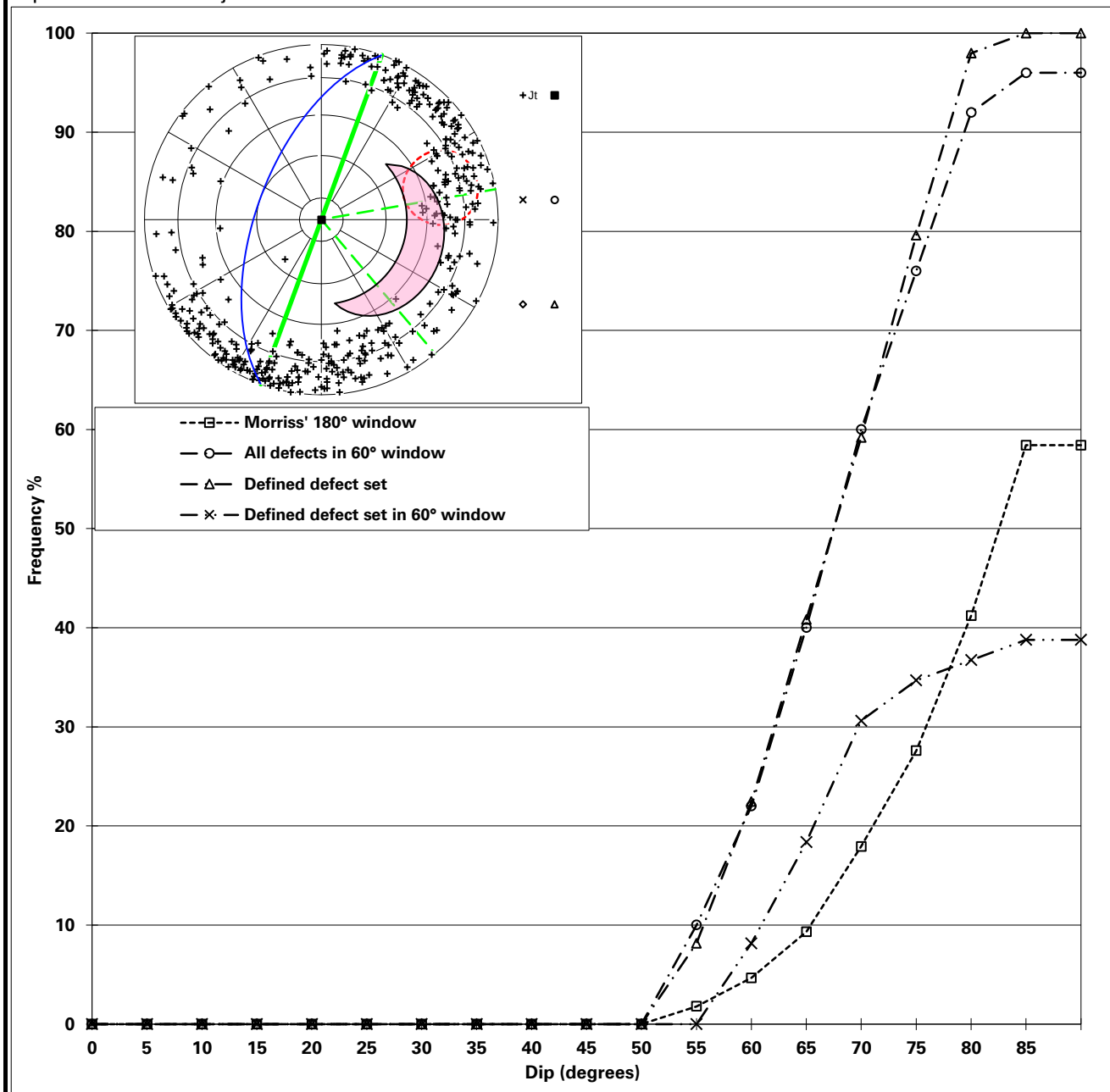
Number of Unstable Wedges 1607
Number of Wedges Analysed 2352

From a possible Total Number of 2352



PLANAR SLIDING

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 290
Kinematic Window ± 30

DEFECT SET

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

DEFECT SHEAR STRENGTHS

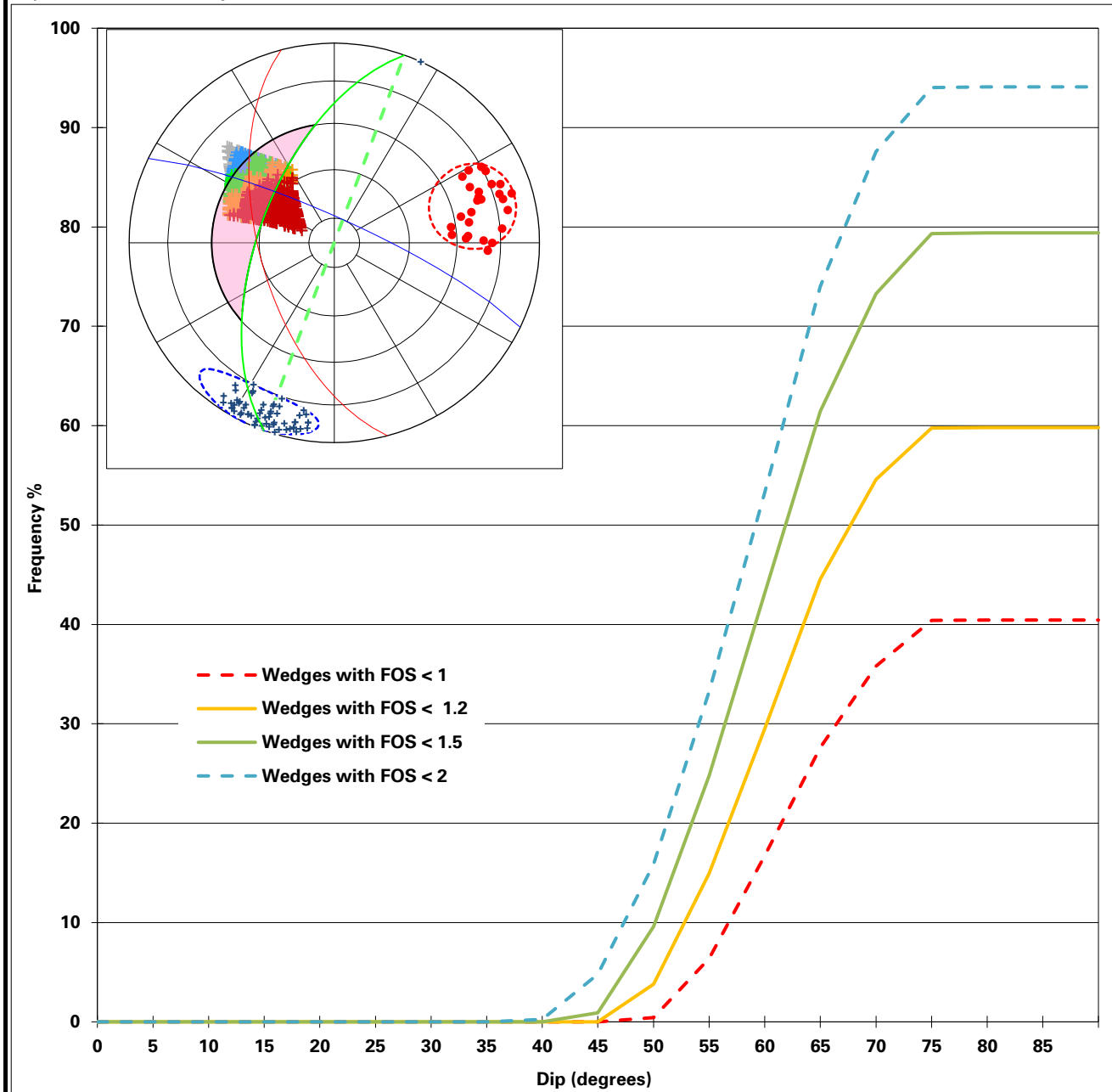
Cohesion = 0 kPa
Friction Angle = 40°

Defects in kinematic window 50
Defects in set JT4 49
Defect in set & window 19
Defects Dipping out of Slope 279



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 290

FIRST SET - RED

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

Defects in set JT4 49

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 40°

SECOND SET - BLUE

JT2	Mean	±
Dip	80	10
Dip Direction	25	20

Defects in set JT2 65

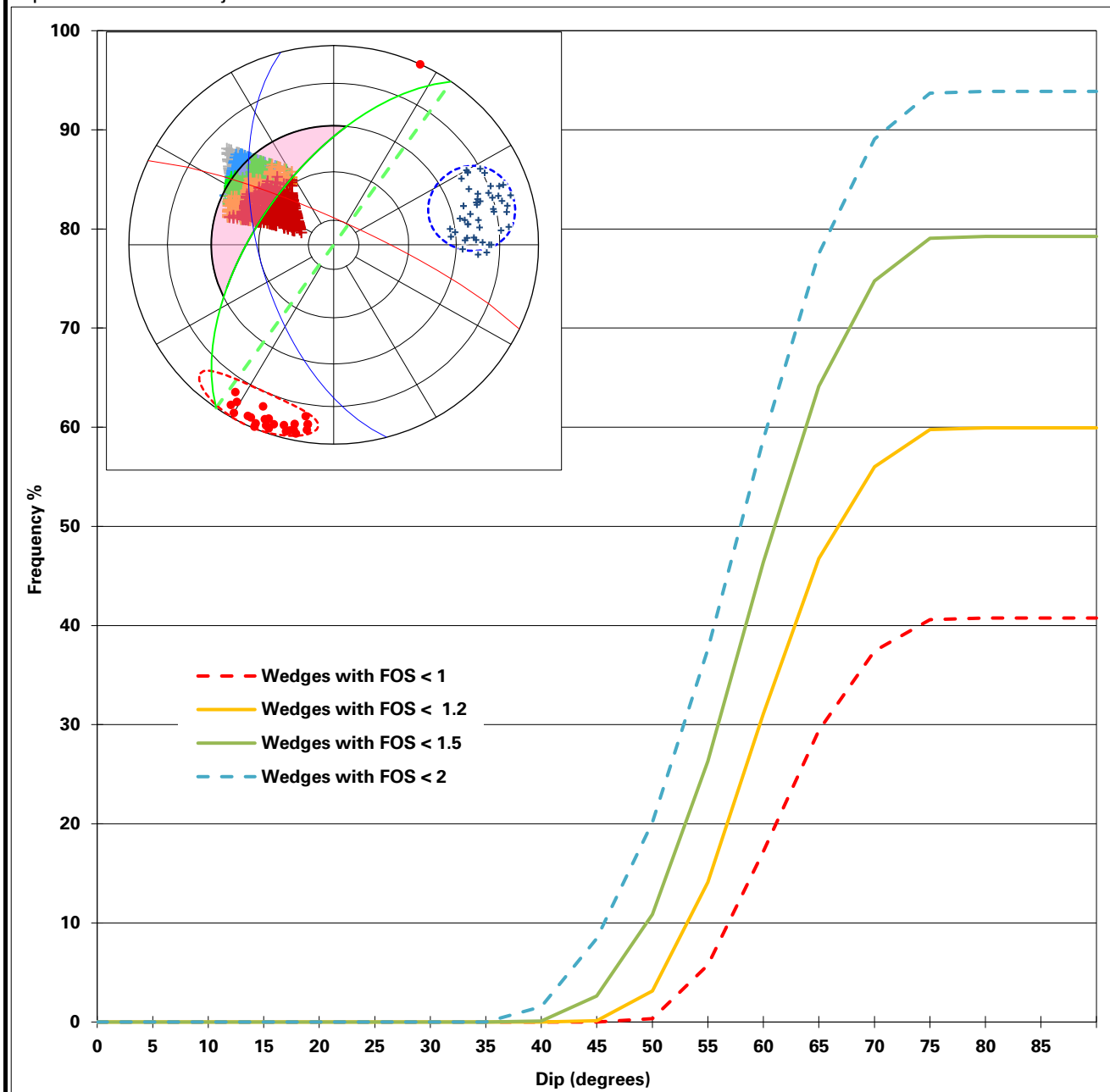
Number of Unstable Wedges 1289
Number of Wedges Analysed 3185

From a possible Total Number of 3185



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 305

FIRST SET - RED

JT2	Mean	±
Dip	80	10
Dip Direction	25	20

Defects in set JT2 65

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 40°

SECOND SET - BLUE

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

Defects in set JT4 49

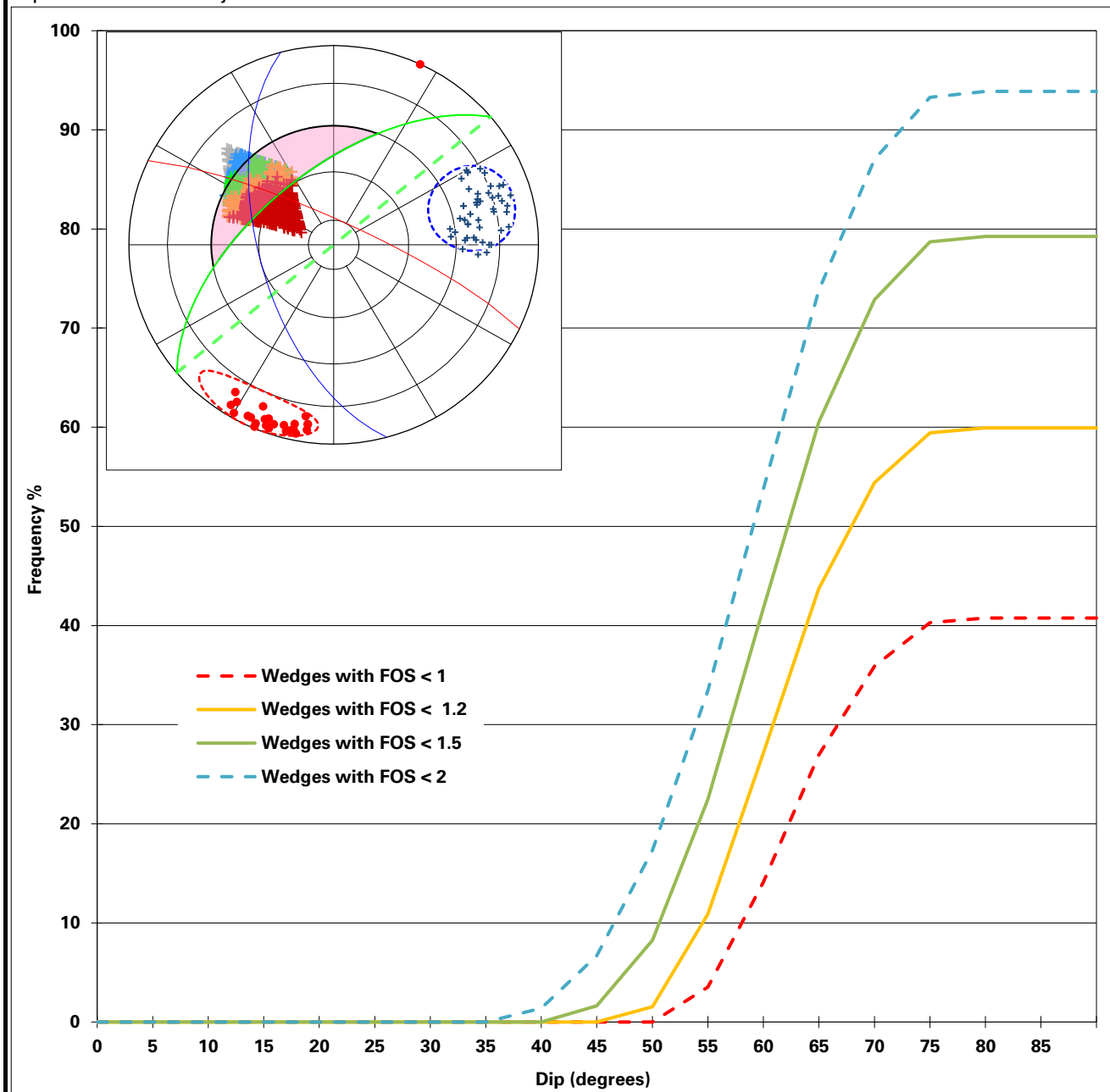
Number of Unstable Wedges 1299
Number of Wedges Analysed 3185

From a possible Total Number of 3185



WEDGE FAILURE

Equal Area Polar Projection



PARAMETERS OF THE PIT WALL

Slope Direction 320

FIRST SET - RED

JT2	Mean	±
Dip	80	10
Dip Direction	25	20

Defects in set JT2 65

DEFECT SHEAR STRENGTHS

Cohesion = 0 kPa

Friction Angle = 40°

SECOND SET - BLUE

JT4	Mean	±
Dip	60	20
Dip Direction	255	15

Defects in set JT4 49

Number of Unstable Wedges 1299
Number of Wedges Analysed 3185

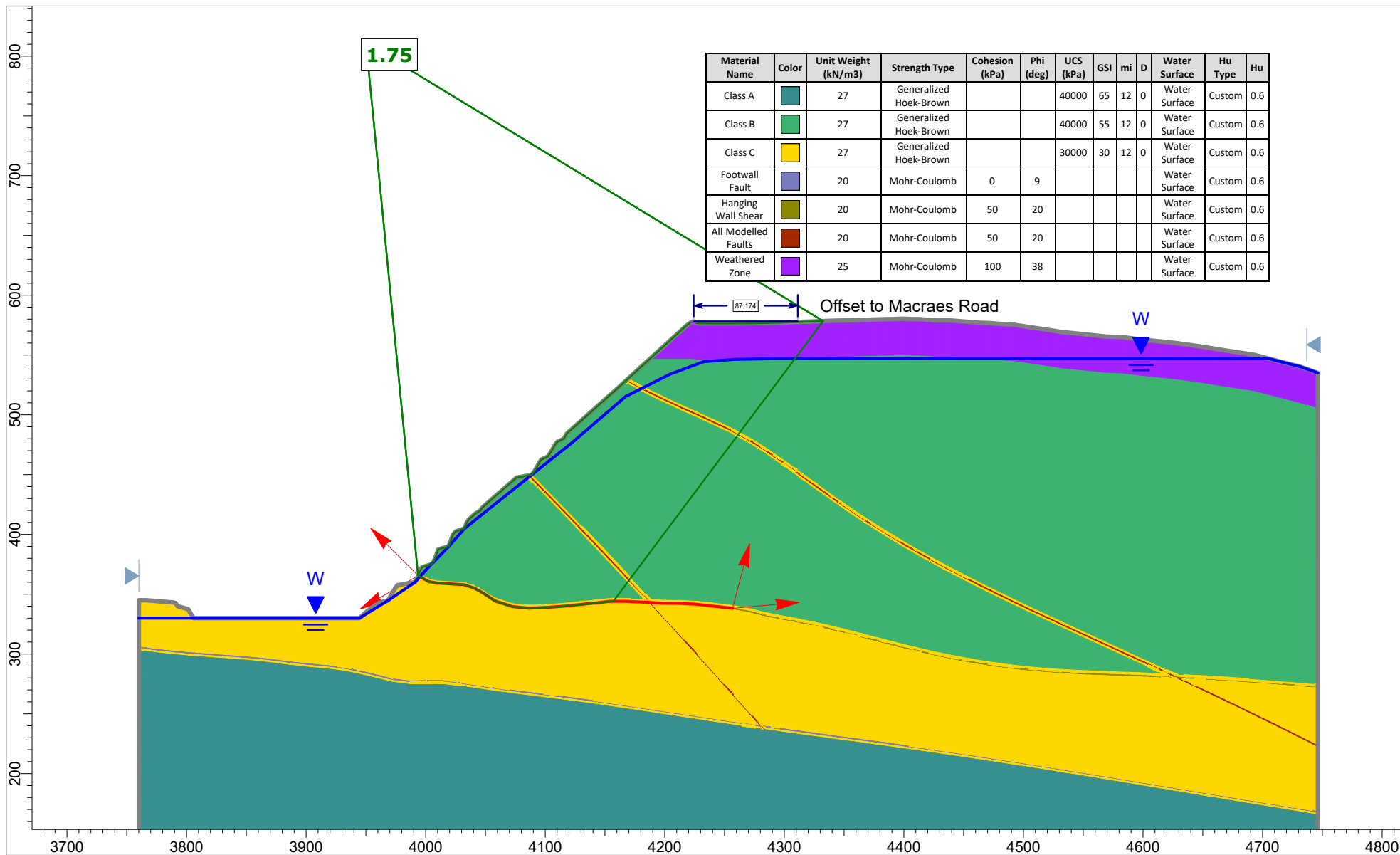
From a possible Total Number of 3185



Appendix D

Innes Mills 2D Stability Analyses

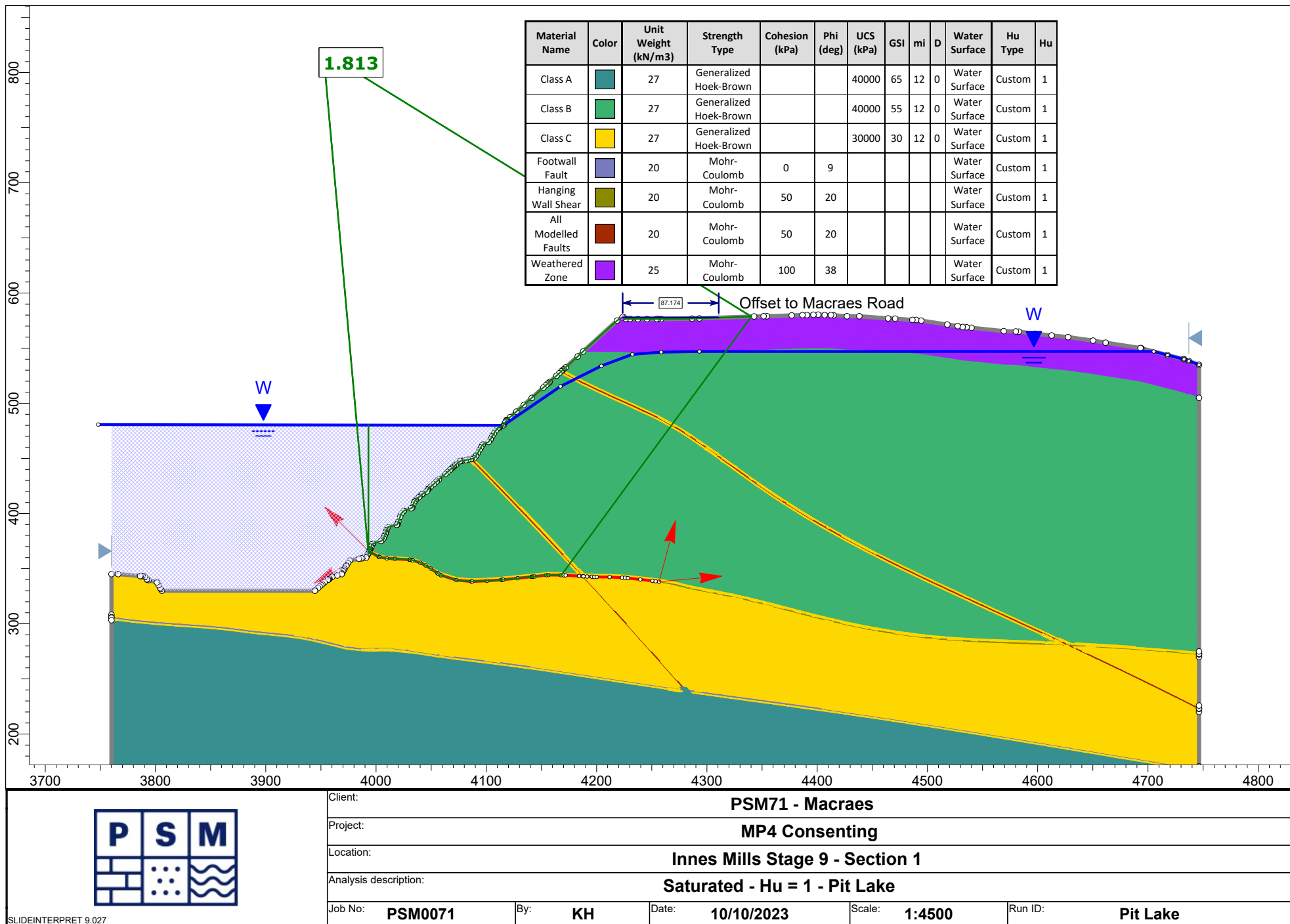


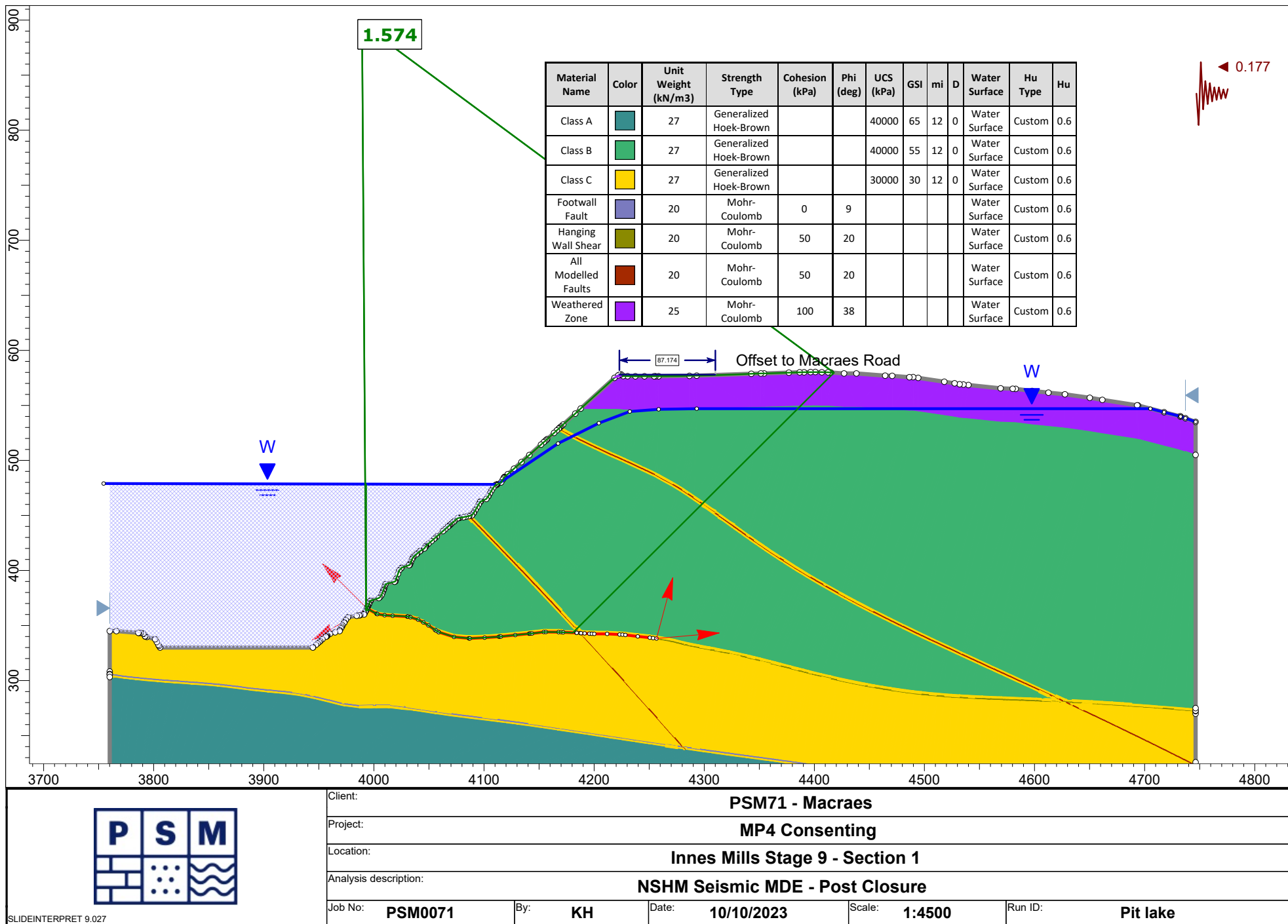


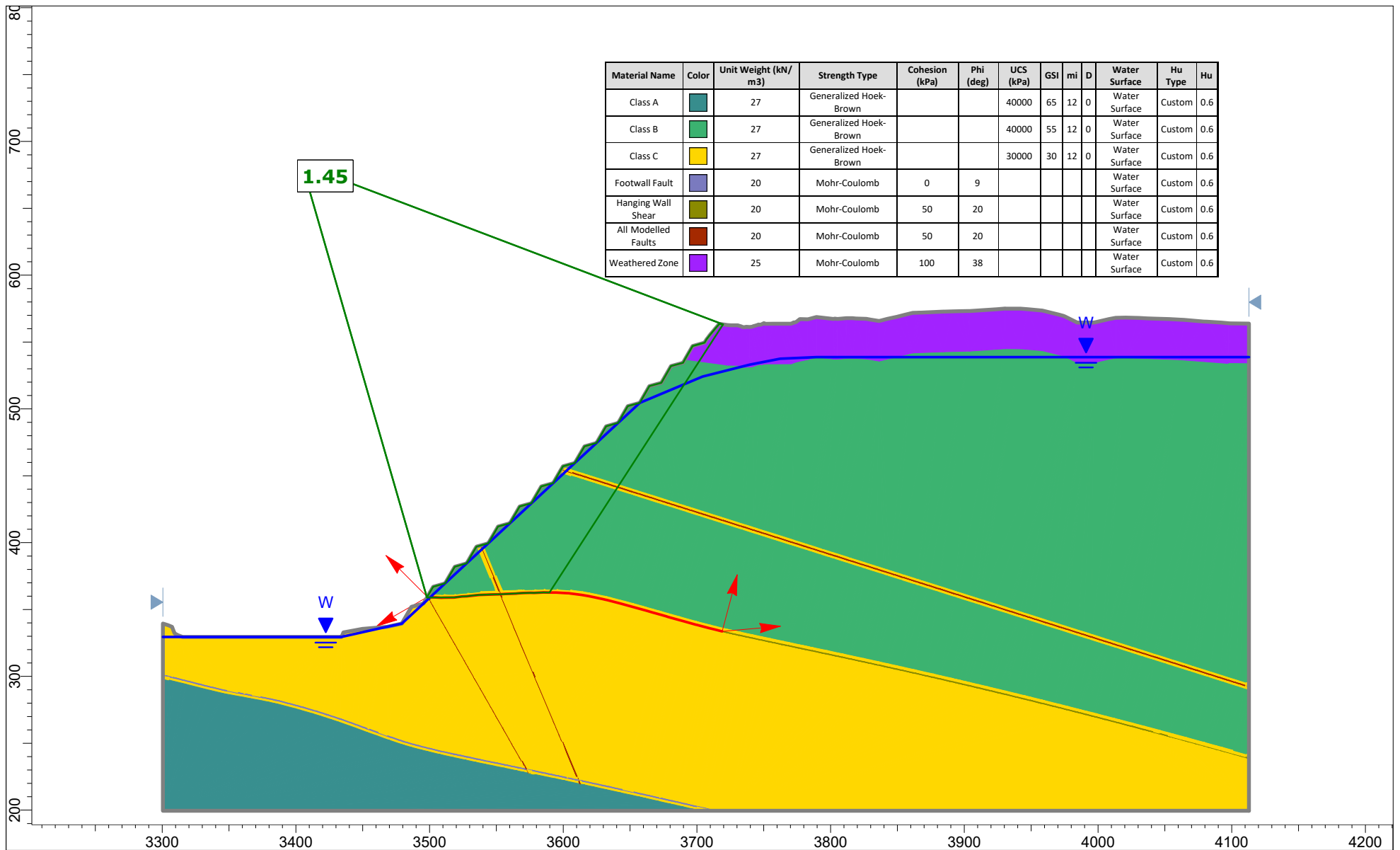
Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	UCS (kPa)	GSI	mi	D	Water Surface	Hu Type	Hu
Class A		27	Generalized Hoek-Brown			40000	65	12	0	Water Surface	Custom	0.6
Class B		27	Generalized Hoek-Brown			40000	55	12	0	Water Surface	Custom	0.6
Class C		27	Generalized Hoek-Brown			30000	30	12	0	Water Surface	Custom	0.6
Footwall Fault		20	Mohr-Coulomb	0	9					Water Surface	Custom	0.6
Hanging Wall Shear		20	Mohr-Coulomb	50	20					Water Surface	Custom	0.6
All Modelled Faults		20	Mohr-Coulomb	50	20					Water Surface	Custom	0.6
Weathered Zone		25	Mohr-Coulomb	100	38					Water Surface	Custom	0.6



Client:	PSM71 - Macraes					
Project:	MP4 Consenting					
Location:	Innes Mills Stage 9 - Section 1					
Analysis description:	Partially saturated - Hu = 0.6					
Job No:	PSM0071	By:	KH	Date:	10/10/2023	Scale: 1:4500
				Run ID:	Block Search	

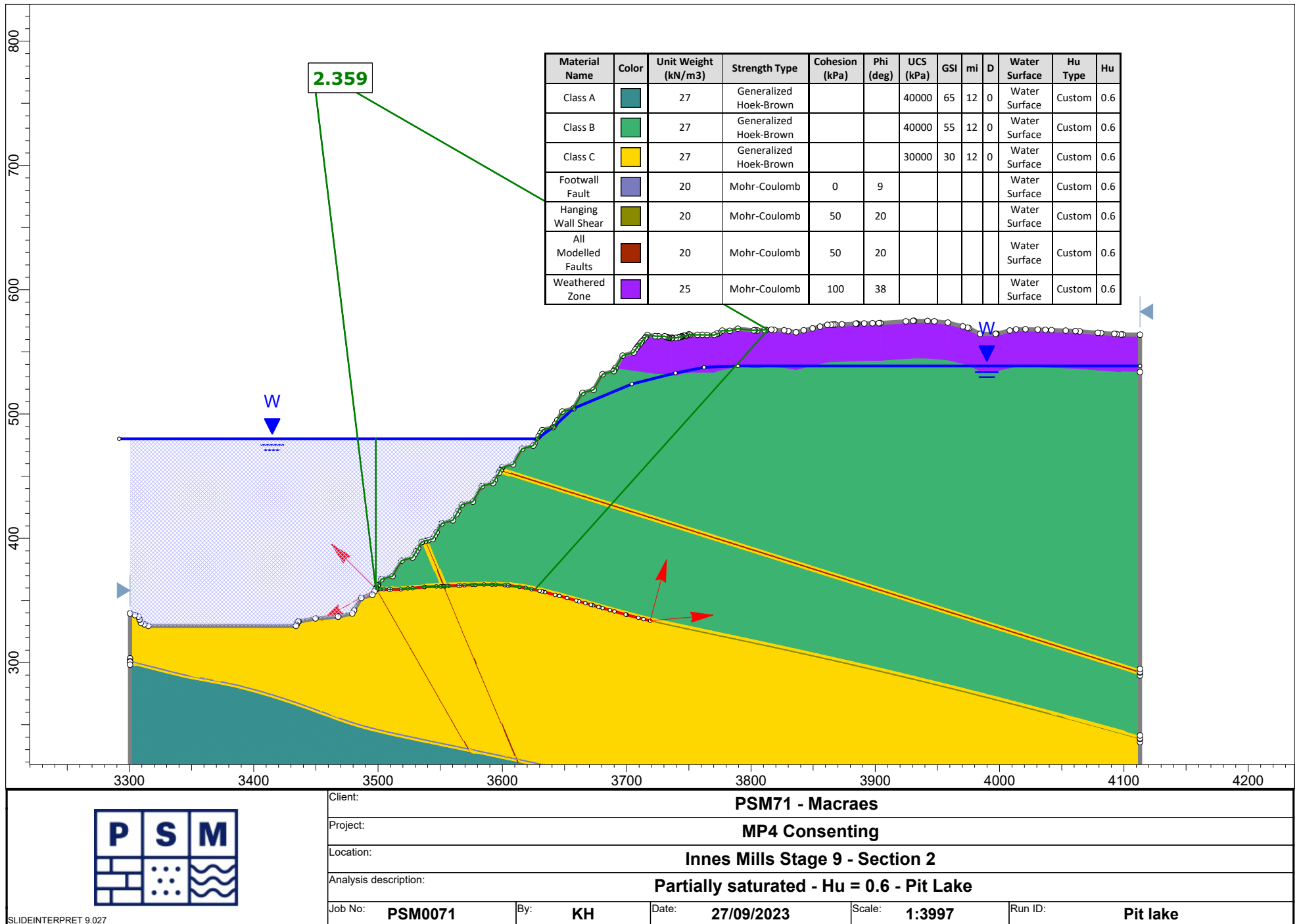


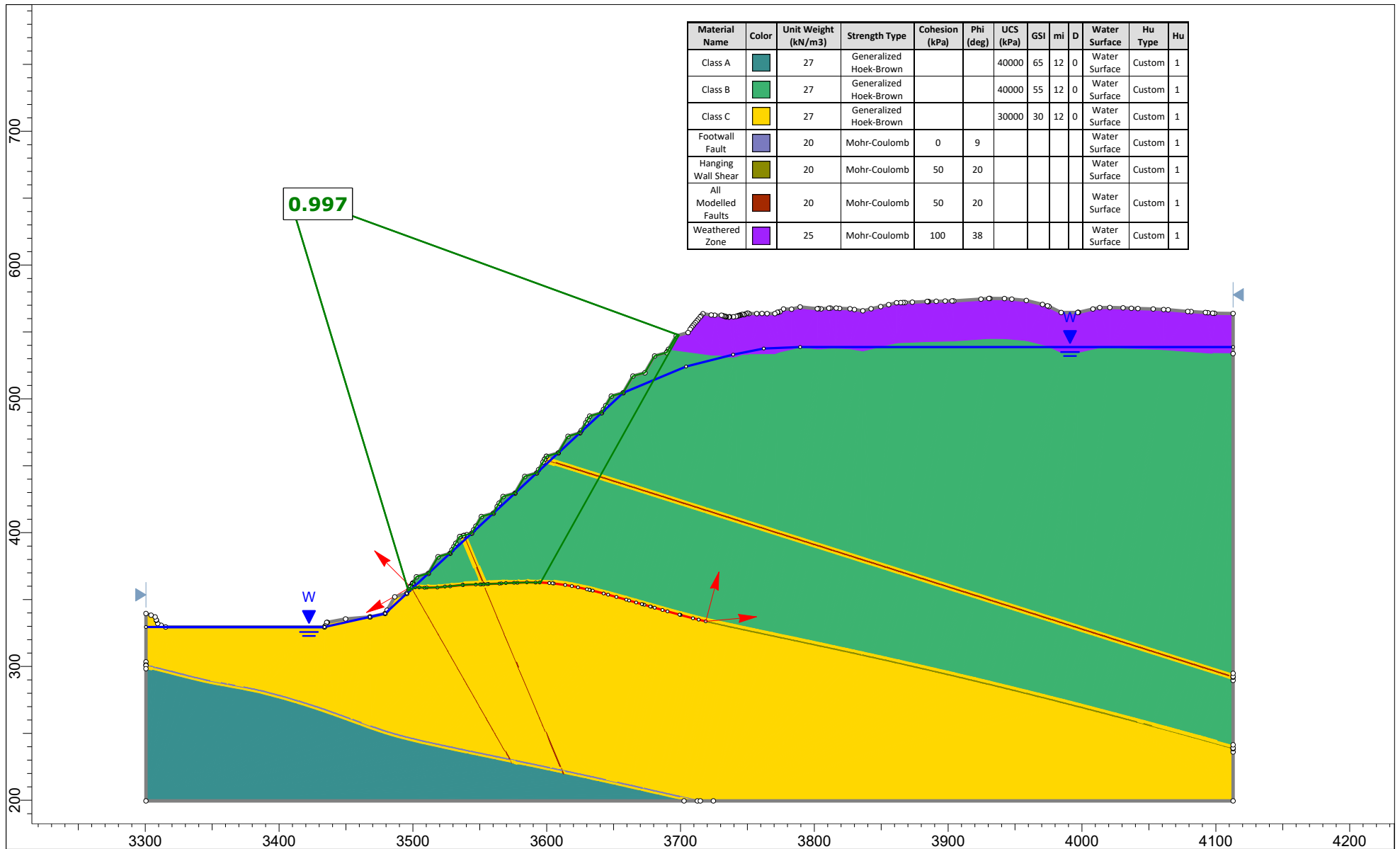




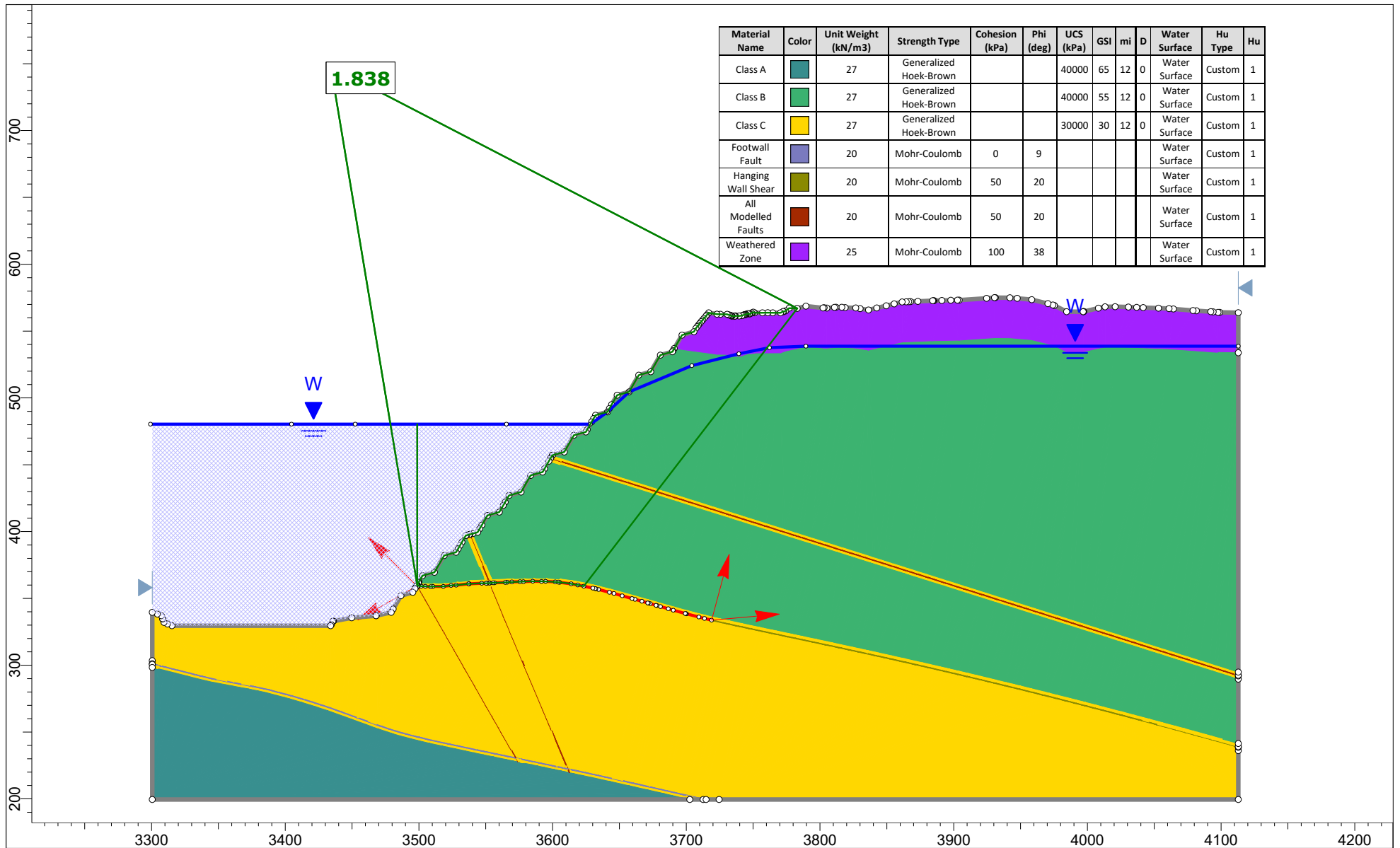
SLIDEINTERPRET 9.027

Client:		PSM71 - Macraes				
Project:		MP4 Consenting				
Location:		Innes Mills Stage 9 - Section 2				
Analysis description:		Partially saturated - Hu = 0.6				
Job No:	PSM0071	By:	KH	Date:	10/10/2023	Scale: 1:4000
				Run ID:	Block Search	

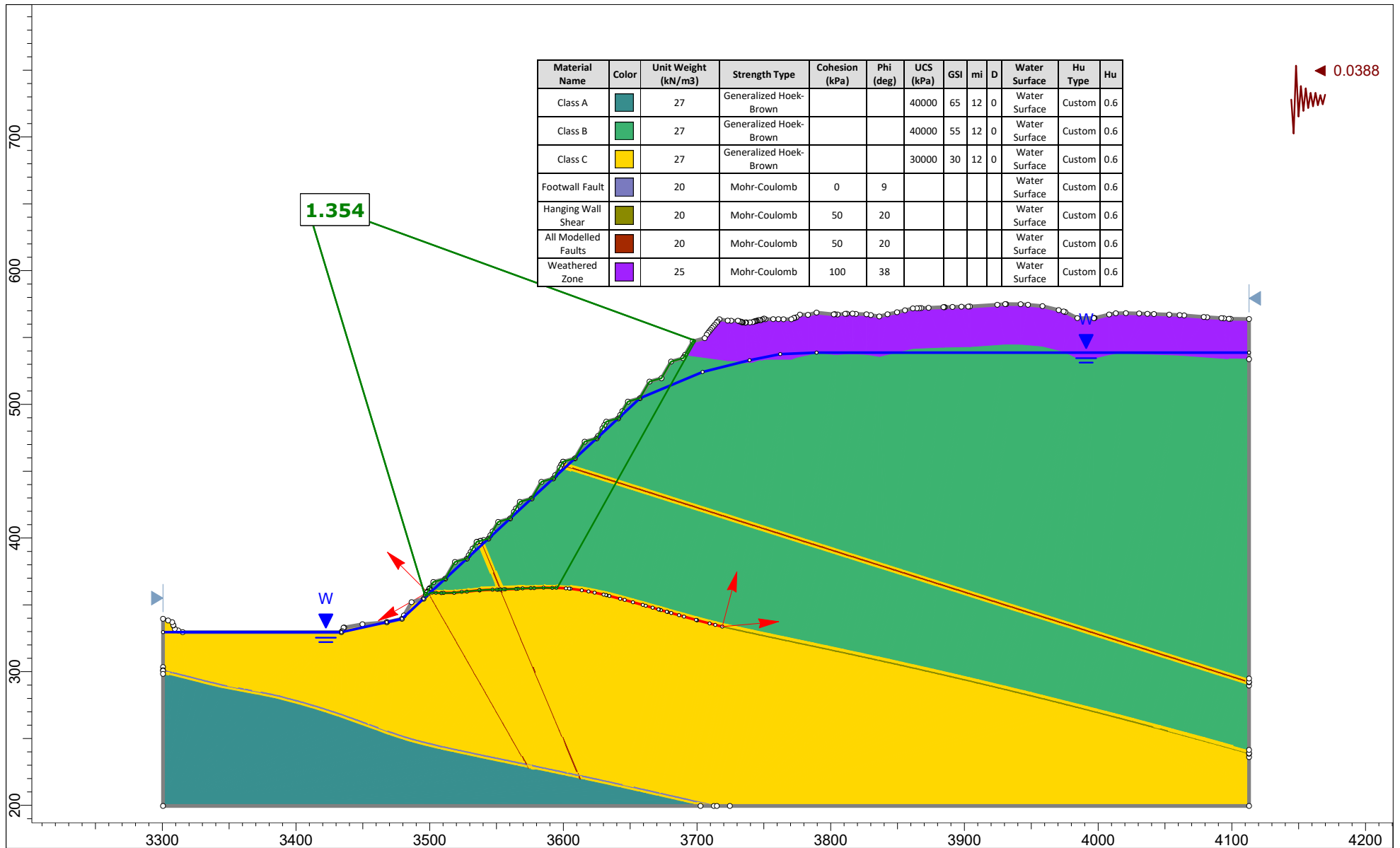




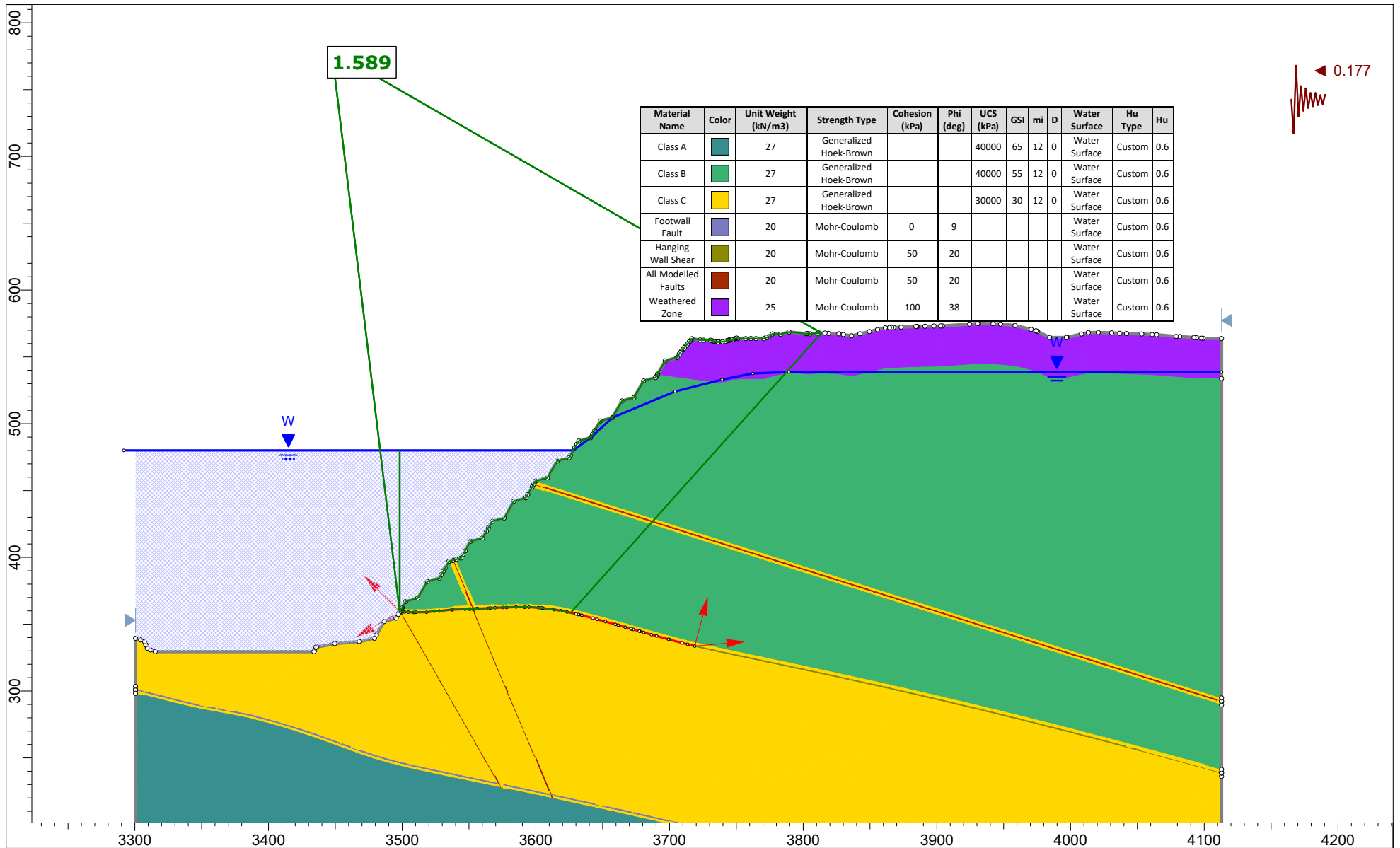
Client:		PSM71 - Macraes		
Project:		MP4 Consenting		
Location:		Innes Mills Stage 9 - Section 2		
Analysis description:		Saturated - Hu = 1		
Job No:	PSM0071	By:	KH	Date:
		10/10/2023		Scale:
		1:4000		Run ID:
		Block Search		



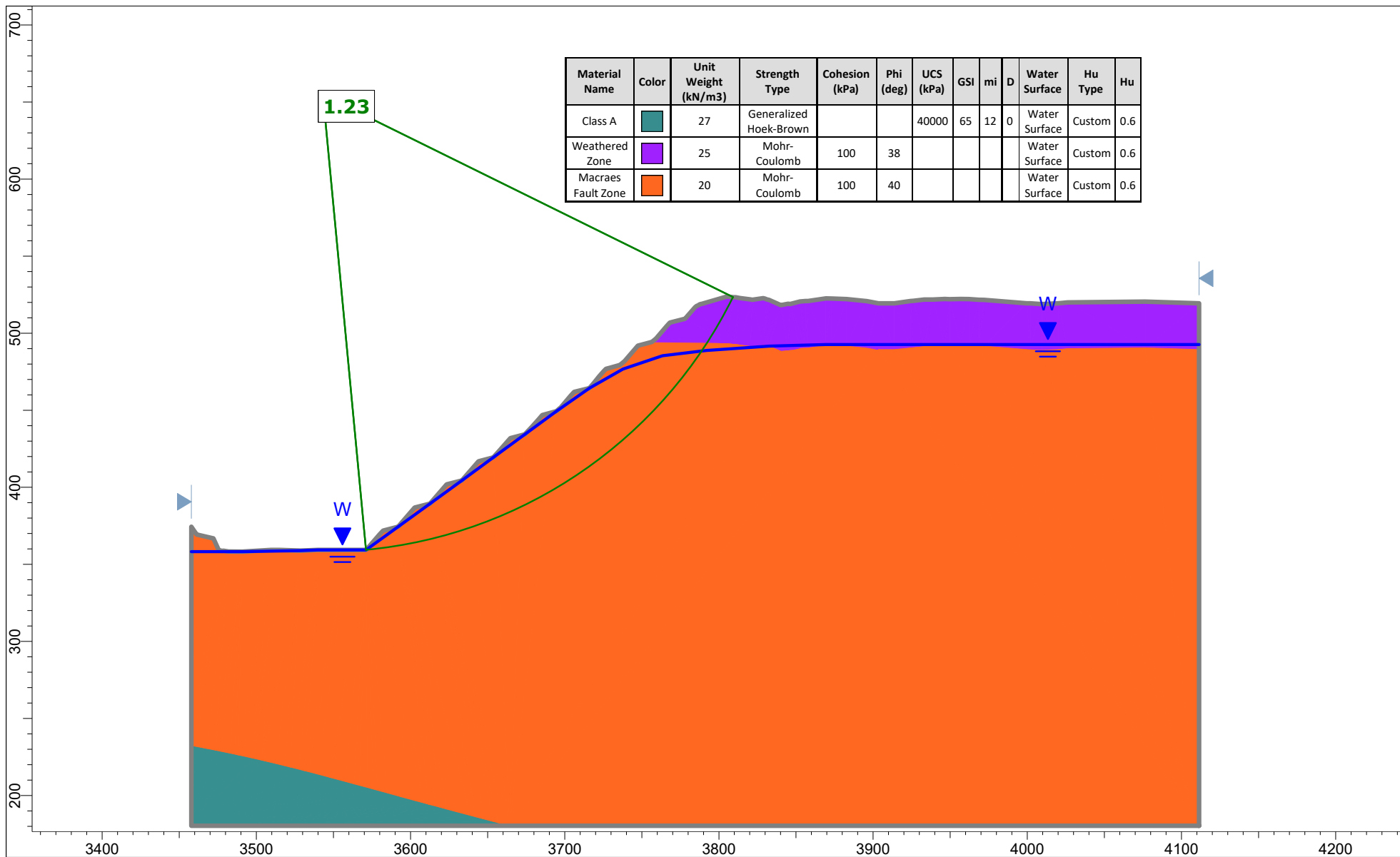
Client:		PSM71 - Macraes			
Project:		MP4 Consenting			
Location:		Innes Mills Stage 9 - Section 2			
Analysis description:		Saturated - Hu = 1 - Pit Lake			
Job No:	PSM0071	By:	KH	Date:	10/10/2023
		Scale:	1:4000	Run ID:	Pit lake



Client:		PSM71 - Macraes				
Project:		MP4 Consenting				
Location:		Innes Mills Stage 9 - Section 2				
Analysis description:		NSHM Seismic OBE				
Job No:	PSM0071	By:	KH	Date:	10/10/2023	Scale: 1:4000
				Run ID:	Block Search - OBE	

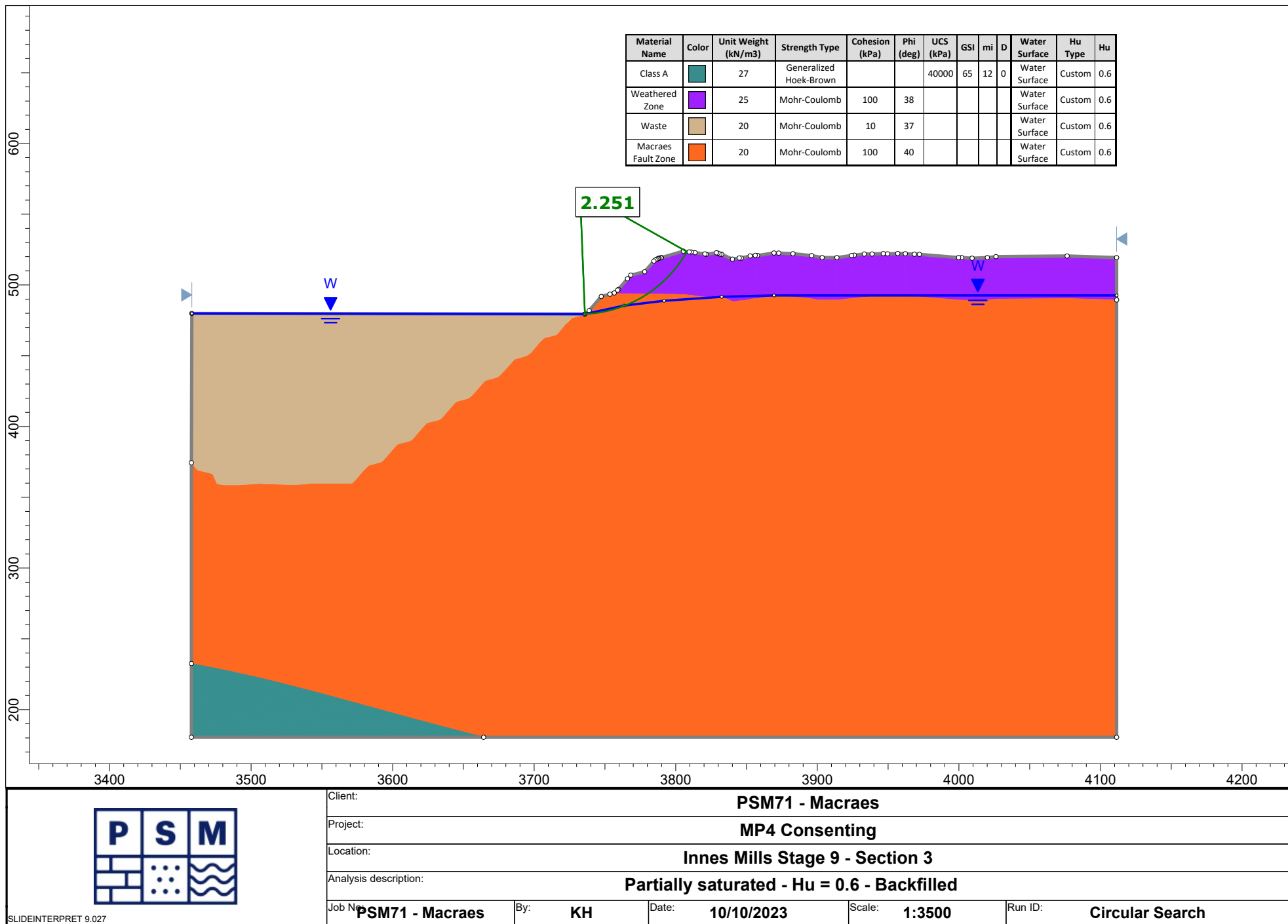


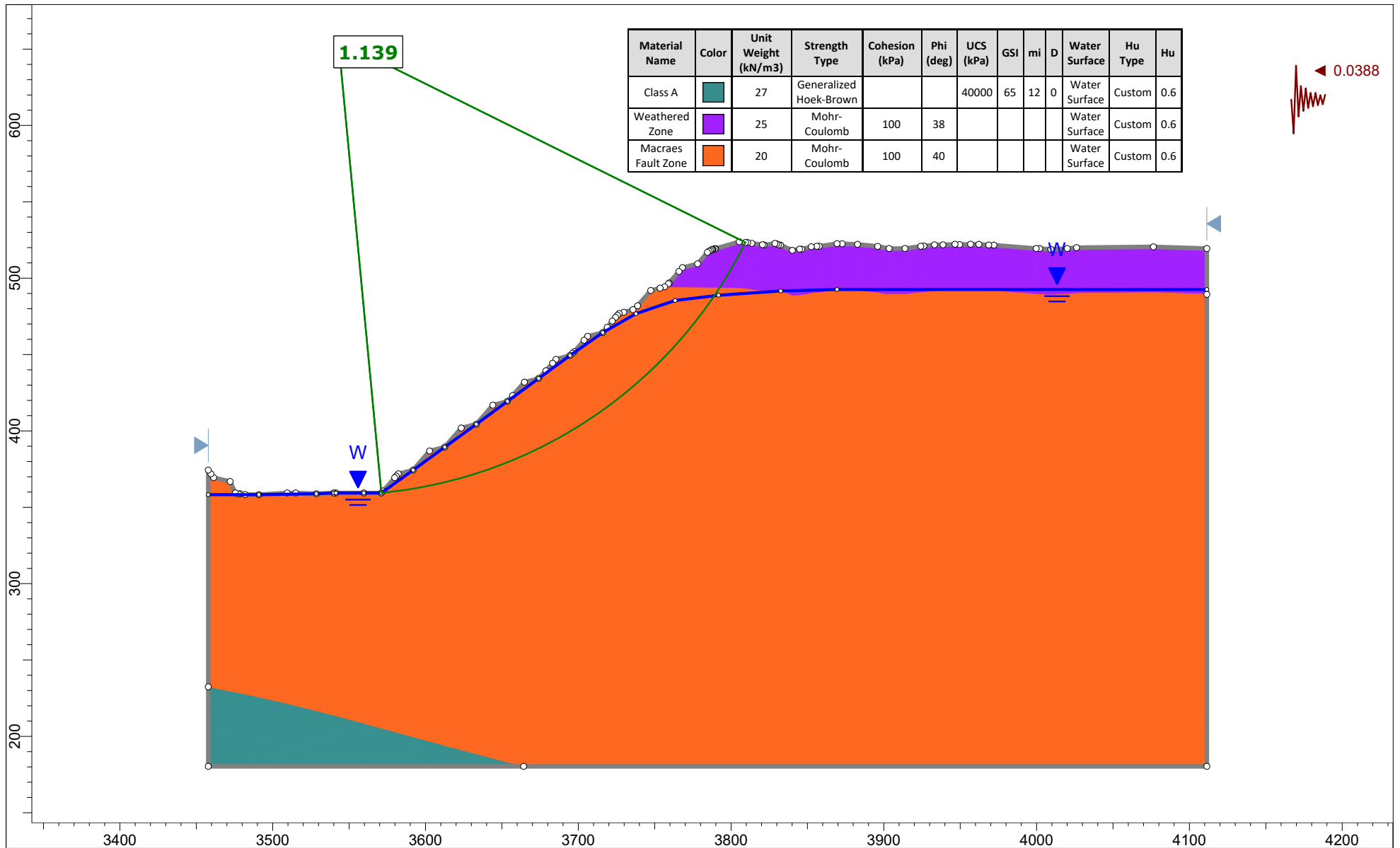
Client:		PSM71 - Macraes				
Project:		MP4 Consenting				
Location:		Innes Mills Stage 9 - Section 2				
Analysis description:		NSHM Seismic MDE - Post Closure				
Job No:	PSM0071	By:	KH	Date:	10/10/2023	Scale: 1:4000
Run ID:					Pit lake- MDE	



SLIDEINTERPRET 9.027

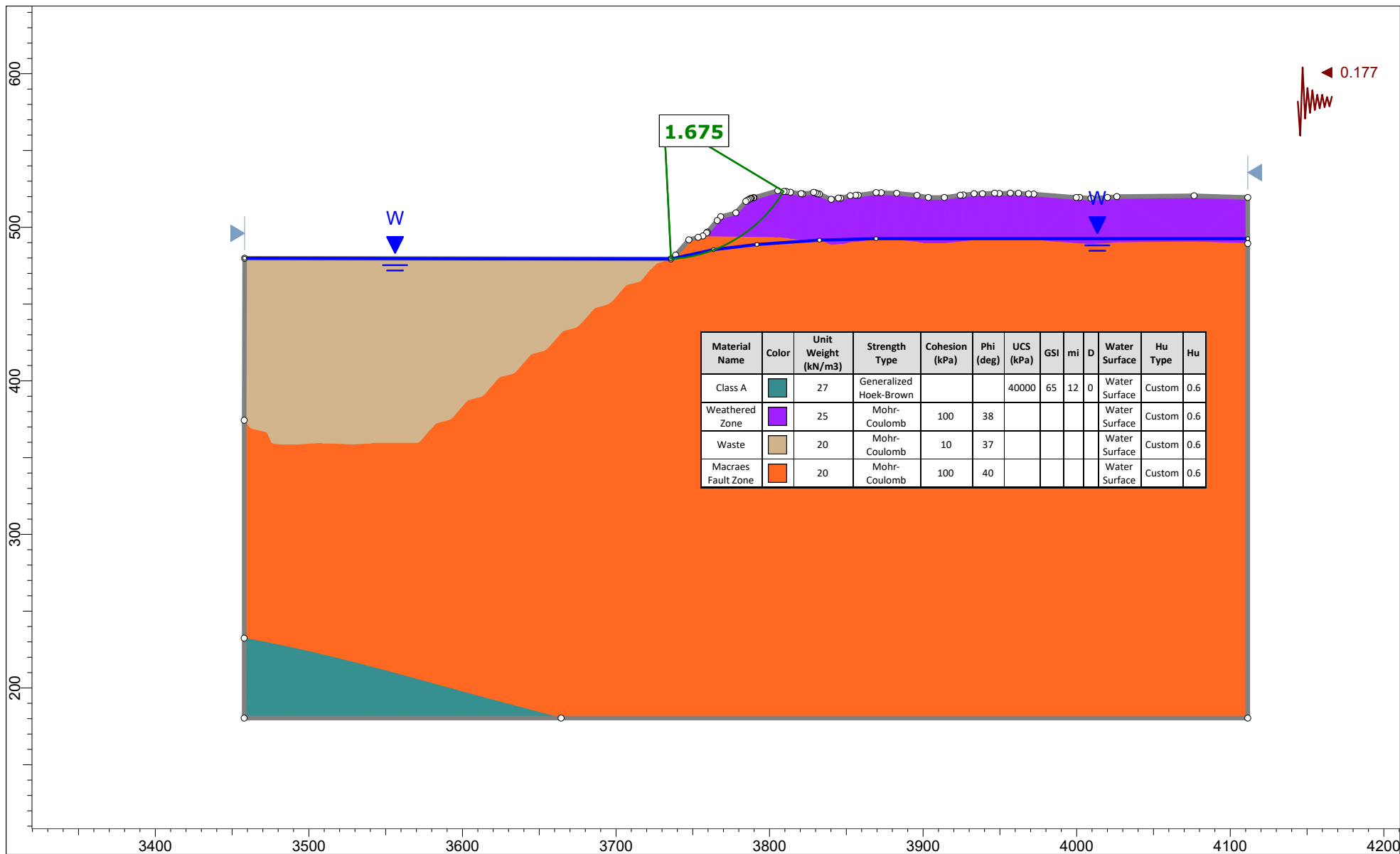
Client:		PSM71 - Macraes			
Project:		MP4 Consenting			
Location:		Innes Mills Stage 9 - Section 3			
Analysis description:		Partially saturated - Hu = 0.6			
Job No:	PSM71 - Macraes	By:	KH	Date:	10/10/2023
Scale:		1:3500		Run ID:	Circular Search





SLIDEINTERPRET 9.027

Client:		PSM71 - Macraes				
Project:		MP4 Consenting				
Location:		Innes Mills Stage 9 - Section 3				
Analysis description:		NSHM Seismic OBE				
Job No:	PSM71 - Macraes	By:	KH	Date:	10/10/2023	Scale: 1:3500
				Run ID:	Circular Search	



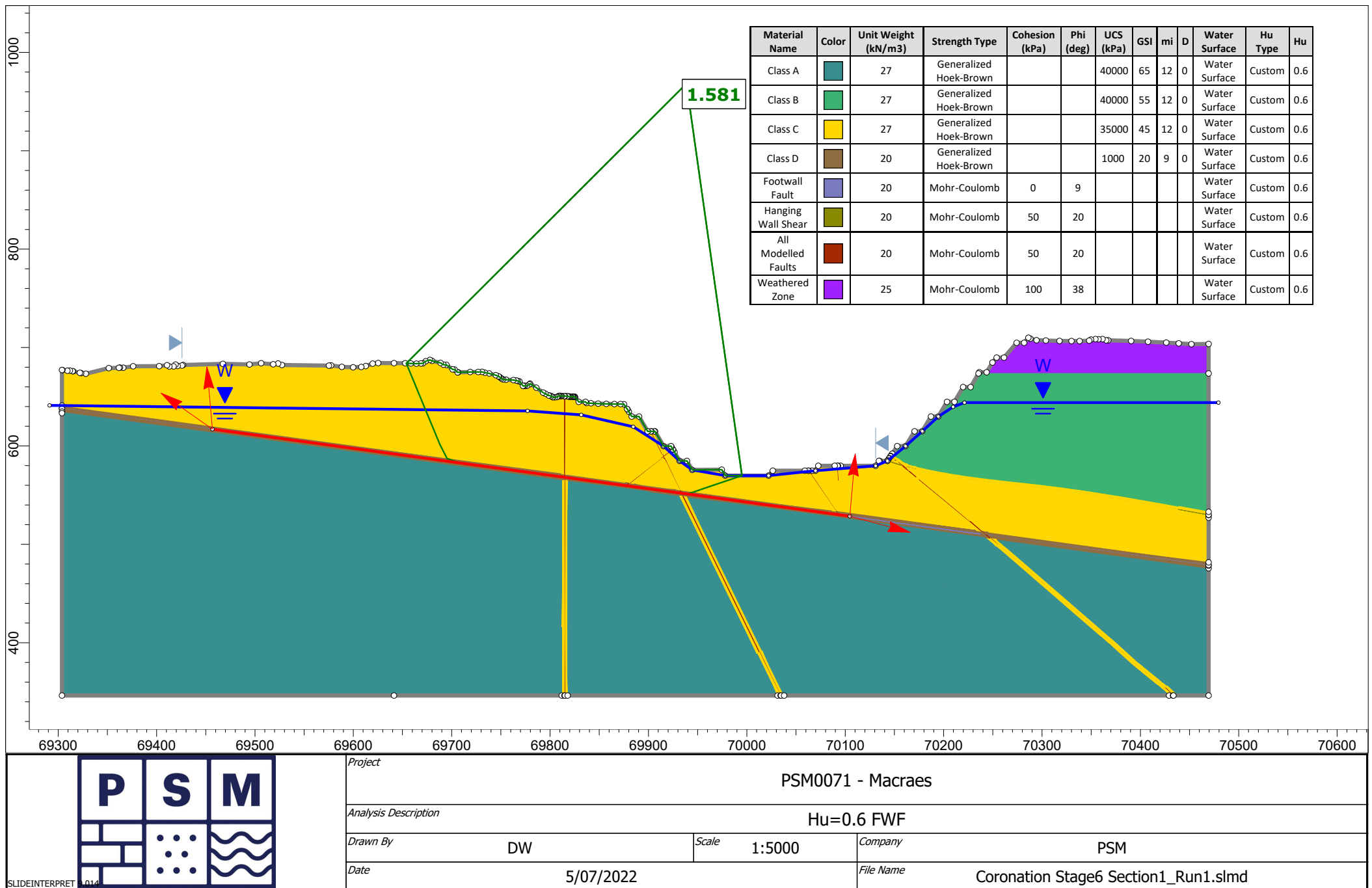
SLIDEINTERPRET 9.027

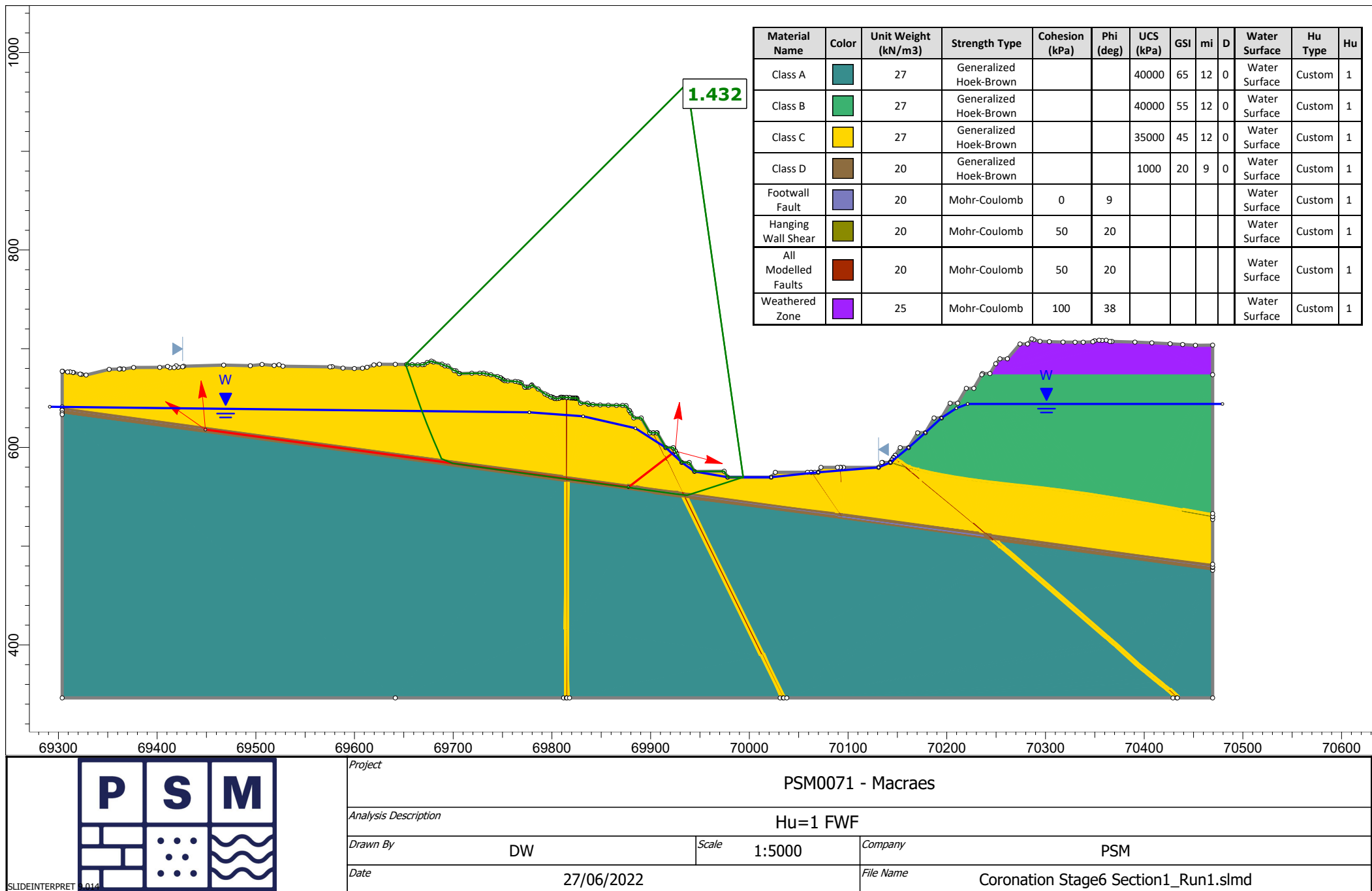
Client:	PSM71 - Macraes					
Project:	MP4 Consenting					
Location:	Innes Mills Stage 9 - Section 3					
Analysis description:	NSHM Seismic MDE - Post Closure					
Job No:	PSM71 - Macraes	By:	KH	Date:	10/10/2023	Scale: 1:3500
						Run ID: Seismic

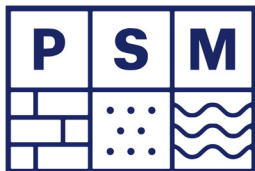
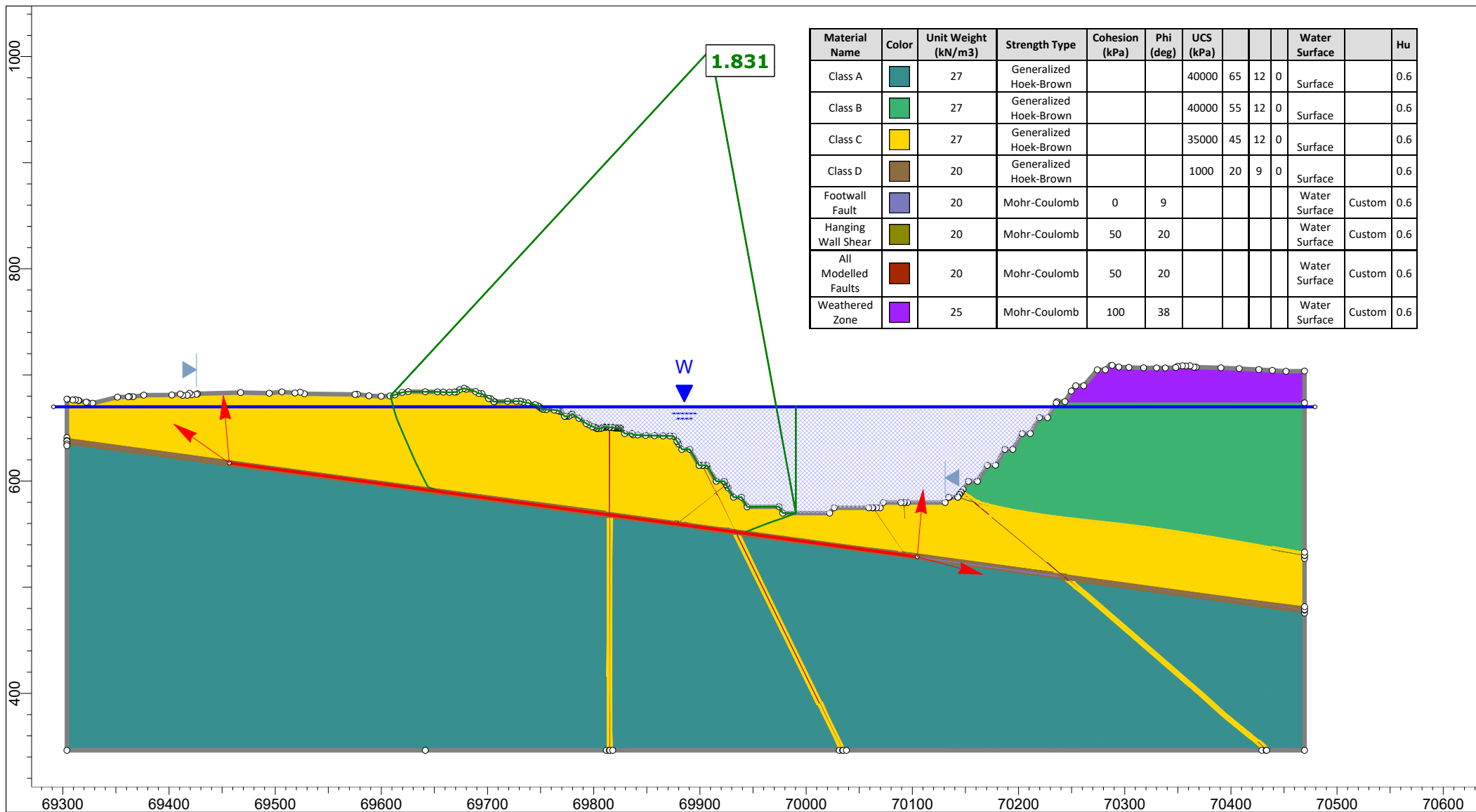
Appendix E

Coronation Stage 6 2D Stability Analyses









Project

PSM0071 - Macraes

Analysis Description

Pit lake - FWF

Drawn By

HG

Scale

1:5000

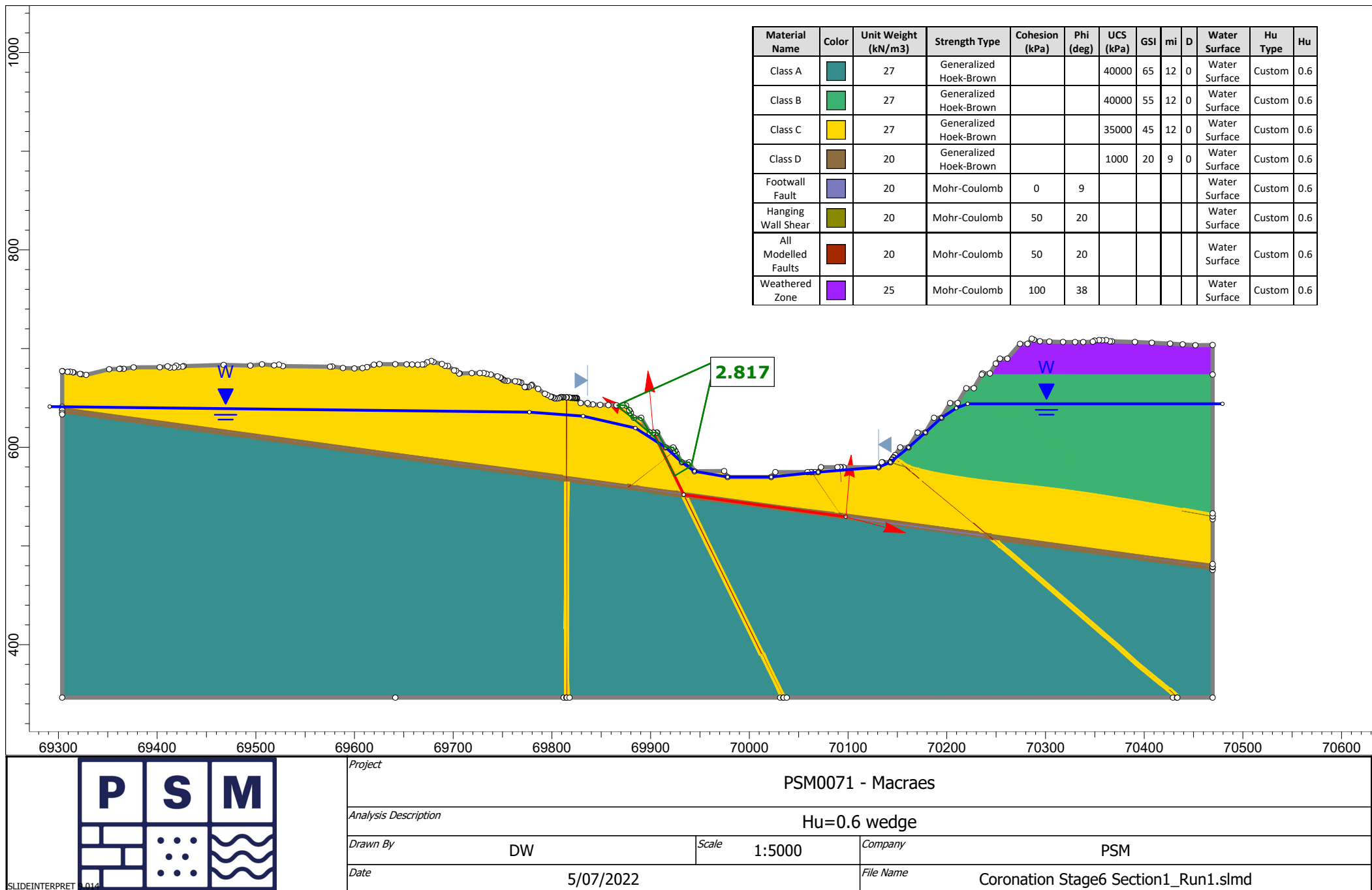
Company

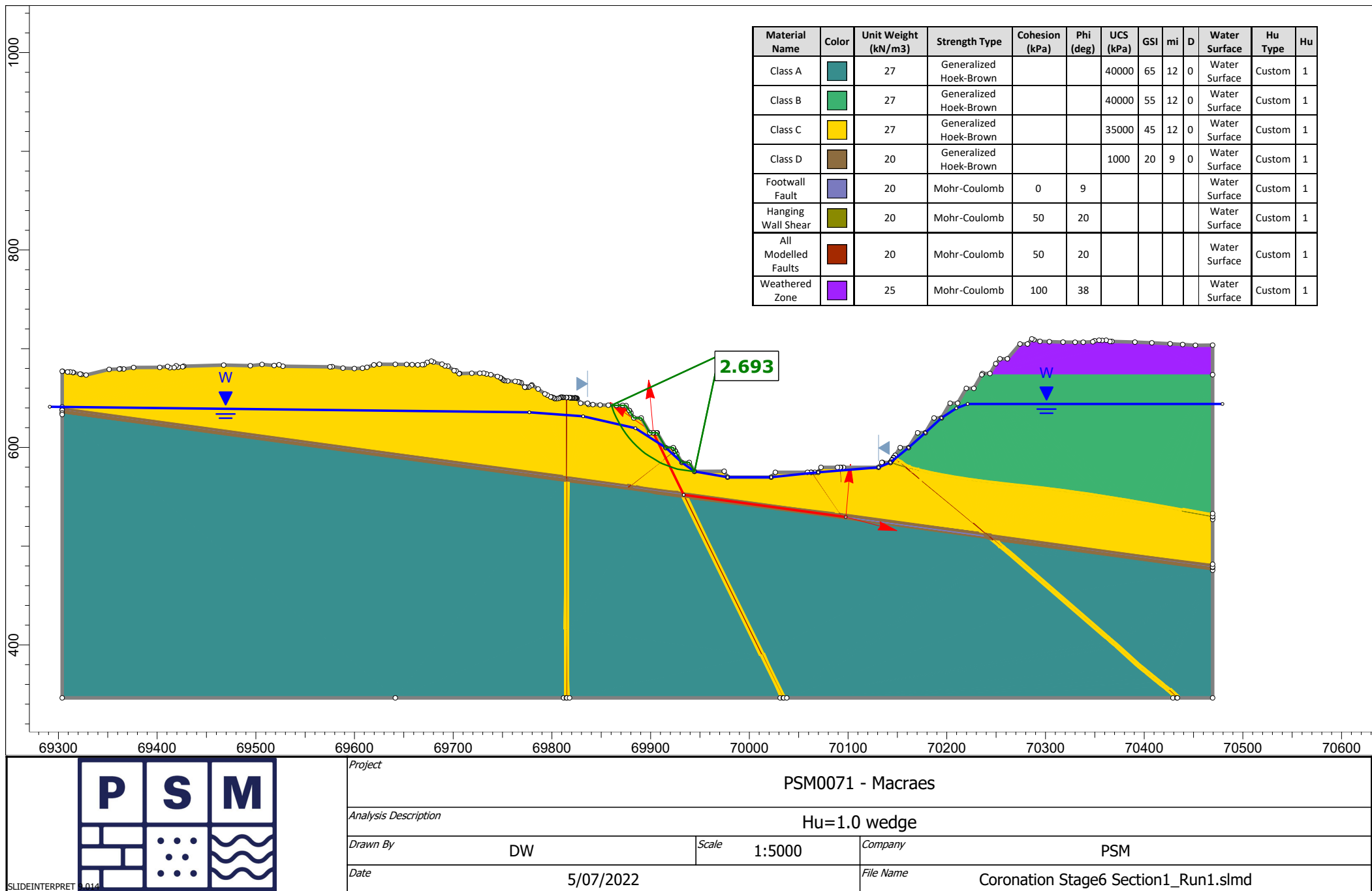
PSM

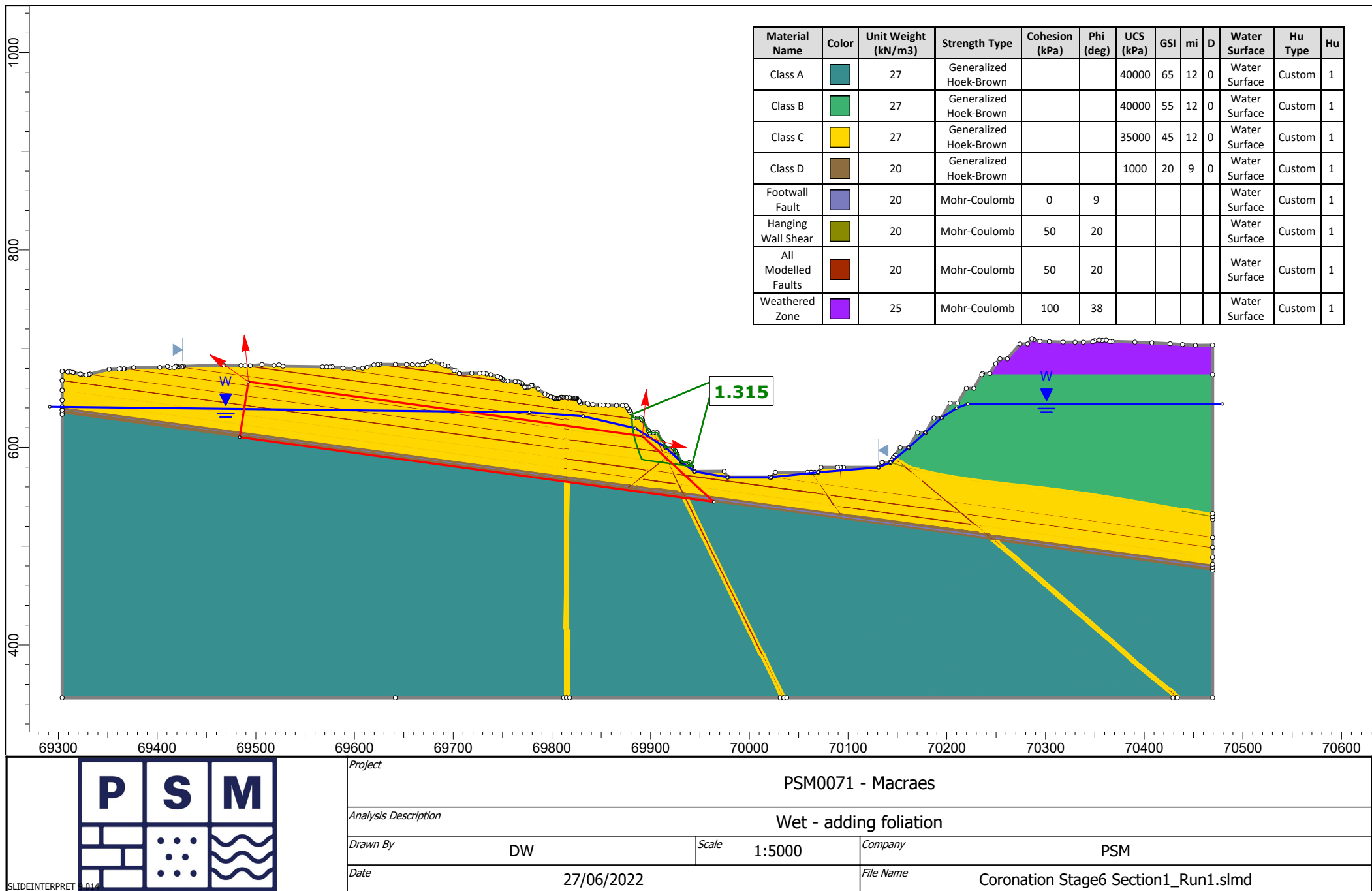
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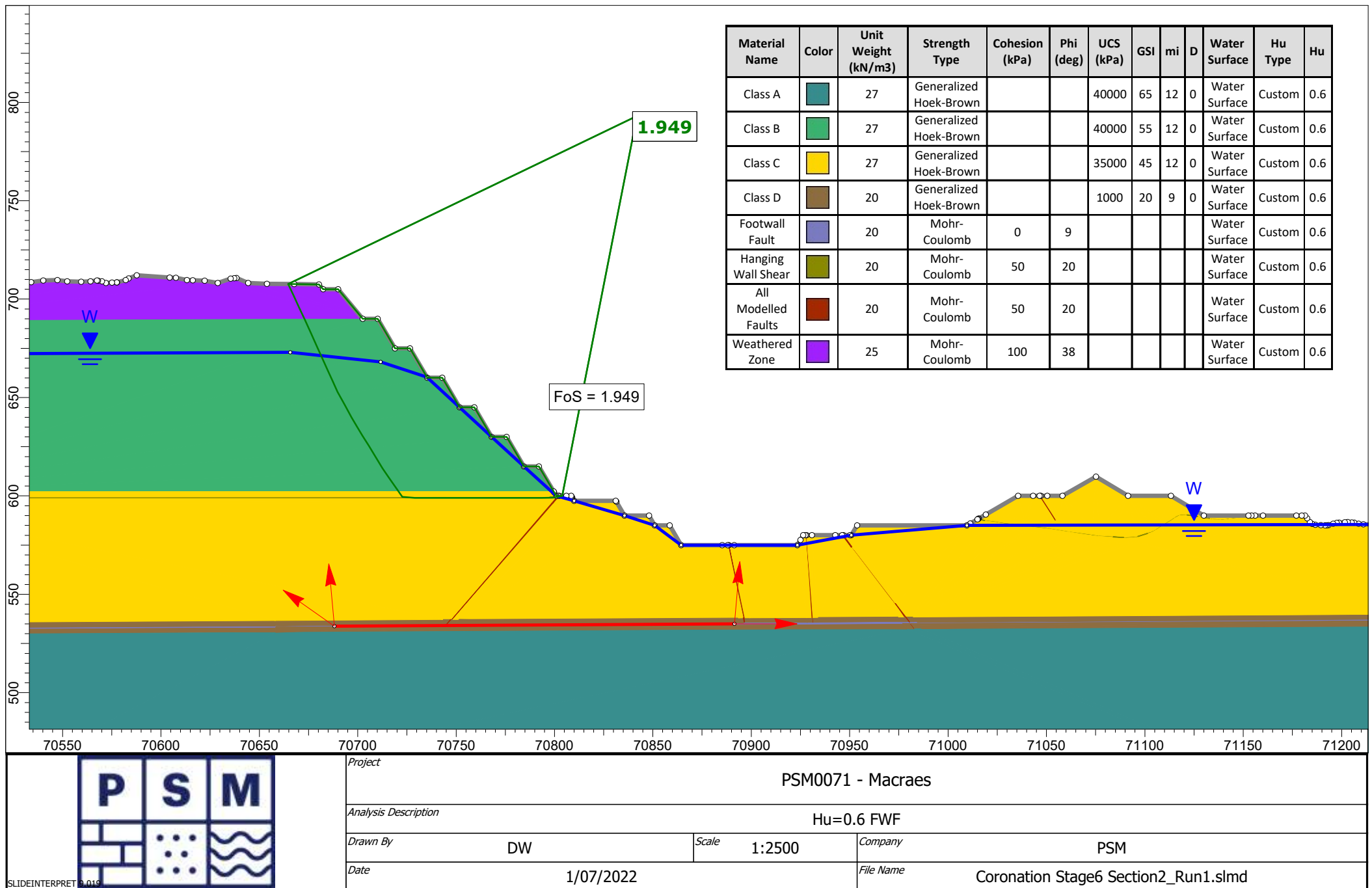
File Name

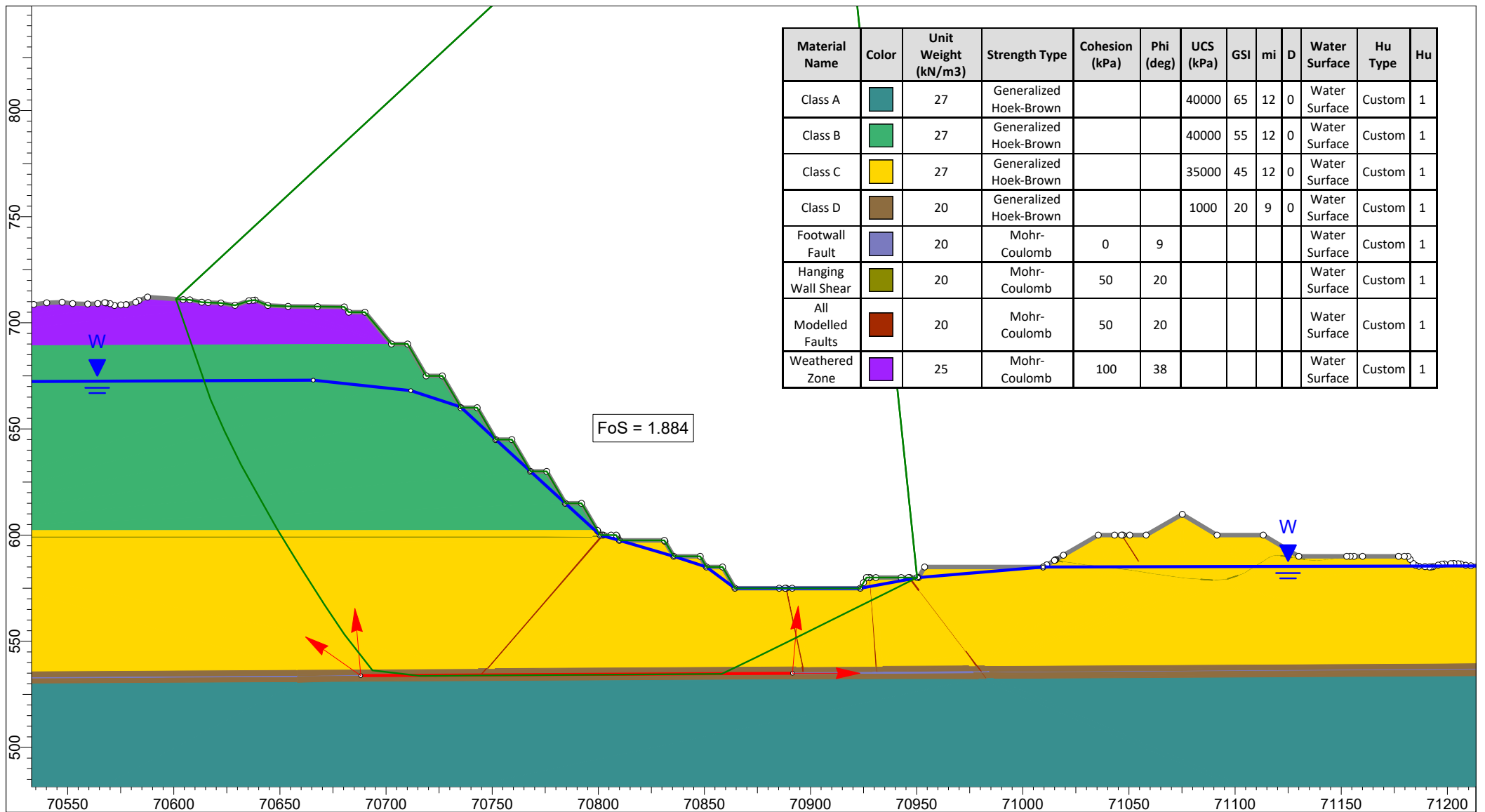
Coronation Stage6 Section1_Run1_HG.slmd





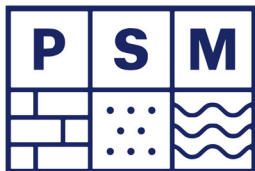
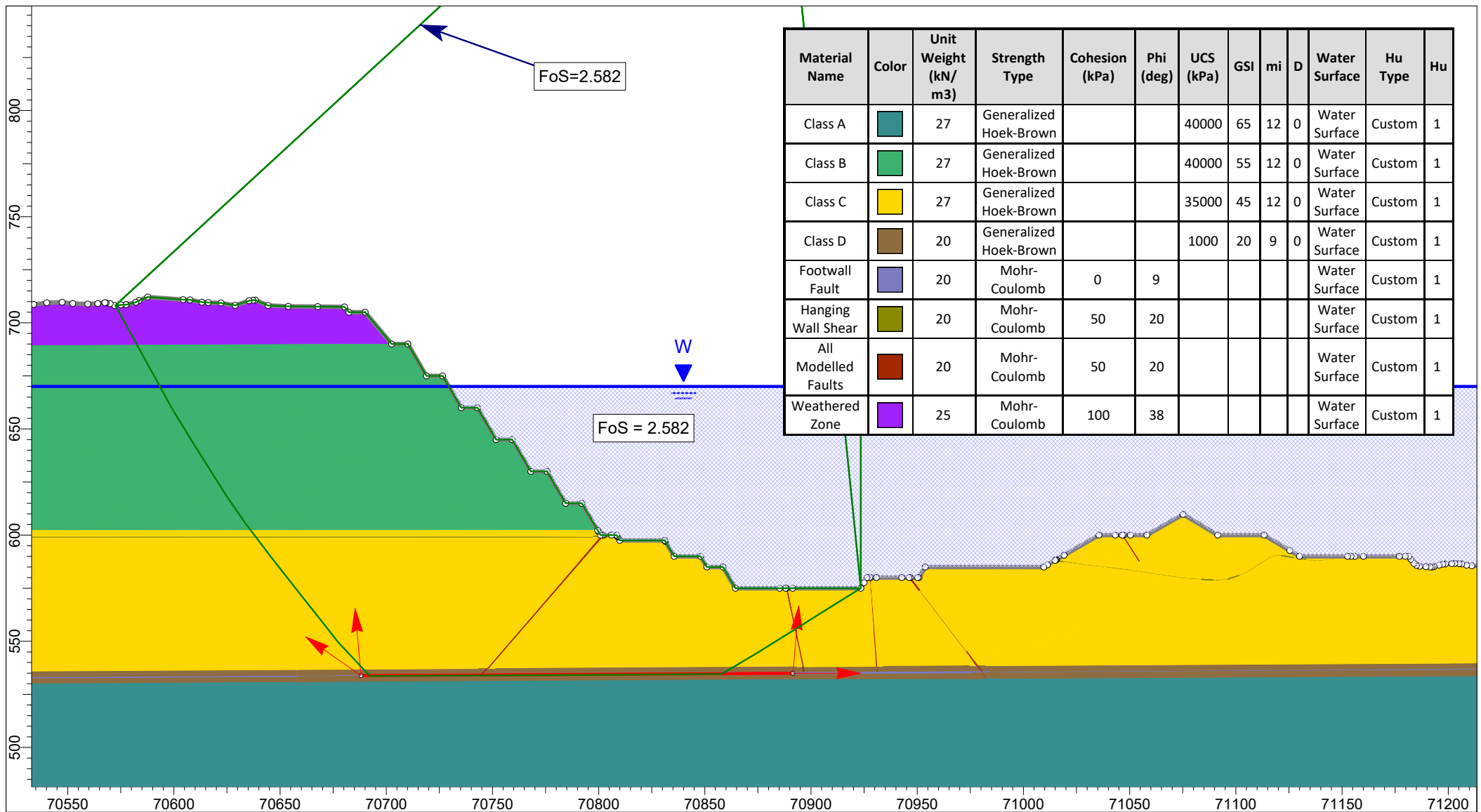






Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	UCS (kPa)	GSI	mi	D	Water Surface	Hu Type	Hu
Class A		27	Generalized Hoek-Brown			40000	65	12	0	Water Surface	Custom	1
Class B		27	Generalized Hoek-Brown			40000	55	12	0	Water Surface	Custom	1
Class C		27	Generalized Hoek-Brown			35000	45	12	0	Water Surface	Custom	1
Class D		20	Generalized Hoek-Brown			1000	20	9	0	Water Surface	Custom	1
Footwall Fault		20	Mohr-Coulomb	0	9					Water Surface	Custom	1
Hanging Wall Shear		20	Mohr-Coulomb	50	20					Water Surface	Custom	1
All Modelled Faults		20	Mohr-Coulomb	50	20					Water Surface	Custom	1
Weathered Zone		25	Mohr-Coulomb	100	38					Water Surface	Custom	1

P S M	Project			PSM0071 - Macraes			
	Analysis Description			Hu=1 - FWF			
	Drawn By		DW	Scale	1:2500	Company	PSM
	Date		27/06/2022	File Name			Coronation Stage6 Section2_Run1.slmd



Project

PSM0071 - Macraes

Analysis Description

Pit Water FWF

Drawn By

HG

Scale

1:2500

Company

PSM

Date

File Name

Coronation Stage6 Section2_Run1_HG.slmd

