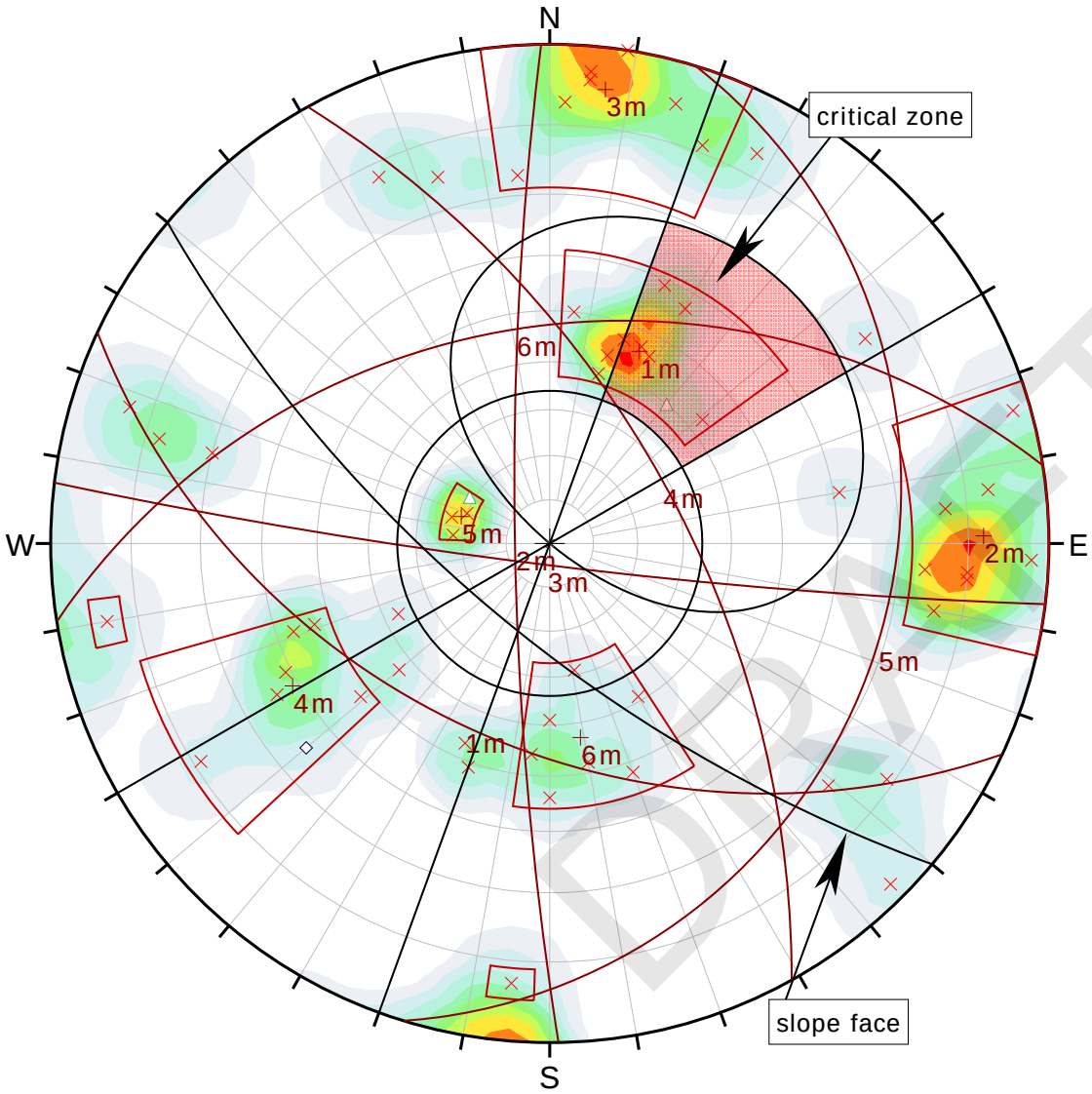


Symbol	TYPE	Quantity
◇	f	1
×	j	57
△	s	2

Color	Density Concentrations
	0.00 - 0.80
	0.80 - 1.60
	1.60 - 2.40
	2.40 - 3.20
	3.20 - 4.00
	4.00 - 4.80
	4.80 - 5.60
	5.60 - 6.40
	6.40 - 7.20
	7.20 - 8.00

Maximum Density	7.48%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	70
Slope Dip Direction	220
Friction Angle	34°
Lateral Limits	20°

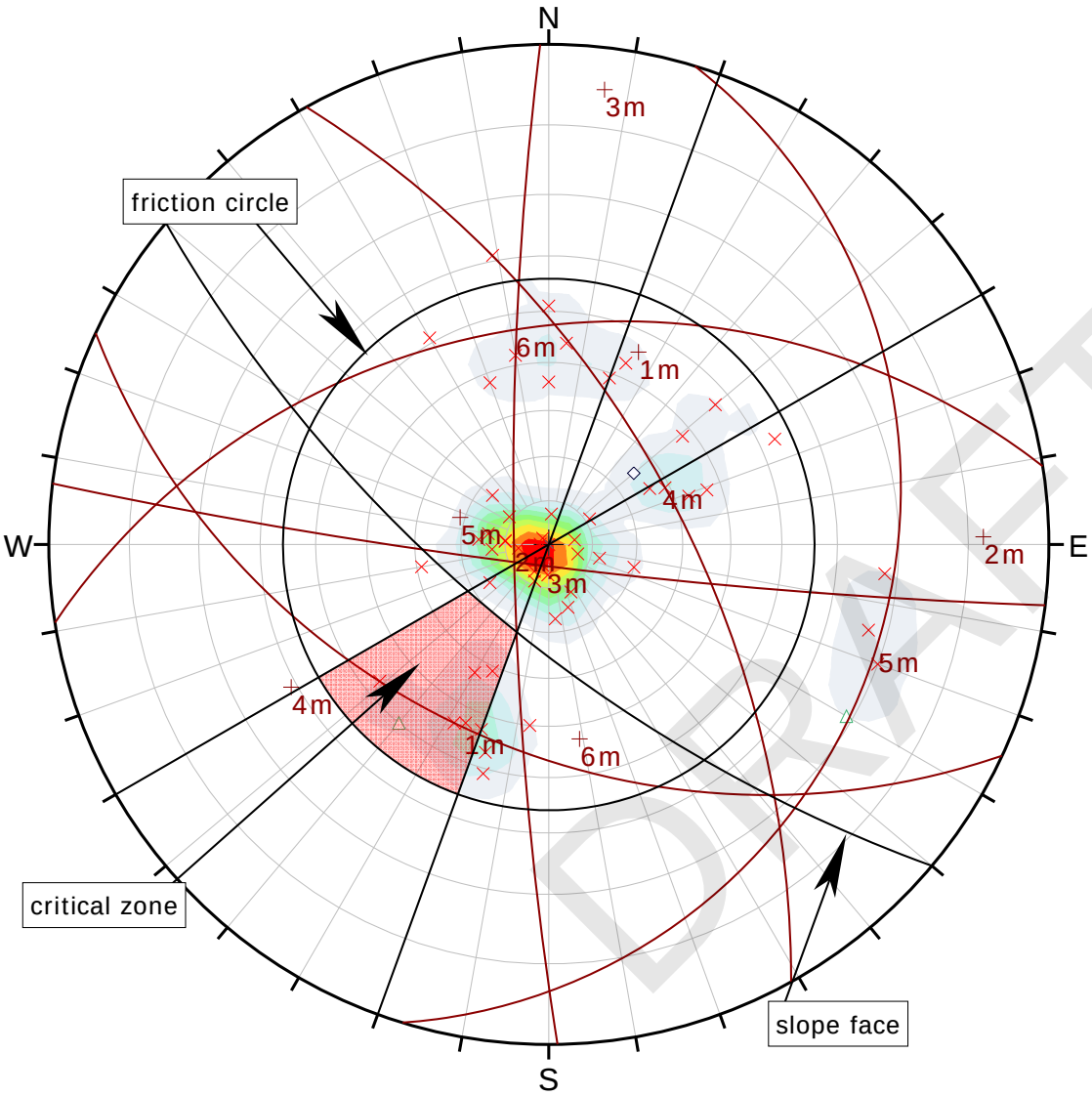
	Critical	Total	%
Planar Sliding (All)	7	60	11.67%
Planar Sliding (Set 1)	7	10	70.00%

Plot Mode	Pole Vectors
Vector Count	60 (60 Entries)
Hemisphere	Lower
Projection	Equal Angle

DRAFT

DIPS 6.008

Project	Nichols Road		
Analysis Description	Planar Sliding - Pole Vectors		
Drawn By	CHJ	*Author*	JMc
File Name	plan 220_70 poles Nichols.dips6	*Date*	3/18/2015
Enclosure	B-3.1		



Symbol	TYPE	Quantity
◇	f	1
×	j	57
△	s	2

Color	Density Concentrations
	0.00 - 2.10
	2.10 - 4.20
	4.20 - 6.30
	6.30 - 8.40
	8.40 - 10.50
	10.50 - 12.60
	12.60 - 14.70
	14.70 - 16.80
	16.80 - 18.90
	18.90 - 21.00

Maximum Density	20.34%
Contour Data	Dip Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	70
Slope Dip Direction	220
Friction Angle	34°
Lateral Limits	20°

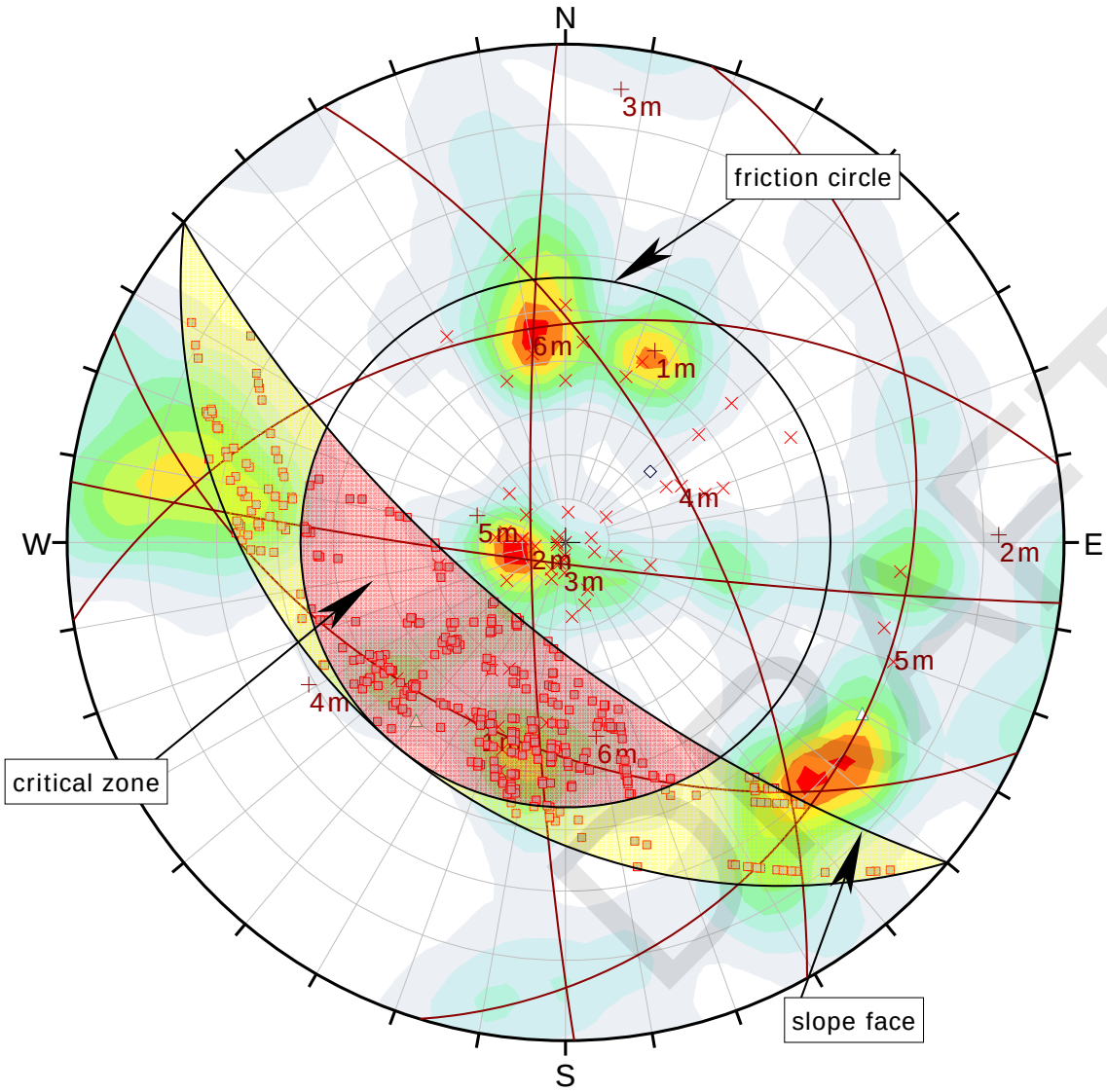
	Critical	Total	%
Planar Sliding (All)	7	60	11.67%
Planar Sliding (Set 1)	7	10	70.00%

Plot Mode	Dip Vectors
Vector Count	60 (60 Entries)
Hemisphere	Lower
Projection	Equal Angle

DRAFT

DIPS 6.008

Project	Nichols Road		
Analysis Description	Planar Sliding - Dip Vectors		
Drawn By	CHJ	*Author*	JMc
File Name	plan 220_70 vectors Nichols.dips6	*Date*	3/18/2015
Enclosure	B-3.2		



Symbol	TYPE	Quantity
◇	f	1
×	j	57
△	s	2

Symbol	Feature
■	Critical Intersection

Color	Density Concentrations
	0.00 - 0.45
	0.45 - 0.90
	0.90 - 1.35
	1.35 - 1.80
	1.80 - 2.25
	2.25 - 2.70
	2.70 - 3.15
	3.15 - 3.60
	3.60 - 4.05
	4.05 - 4.50

Maximum Density	4.25%
Contour Data	Intersections
Contour Distribution	Fisher
Counting Circle Size	1.0%

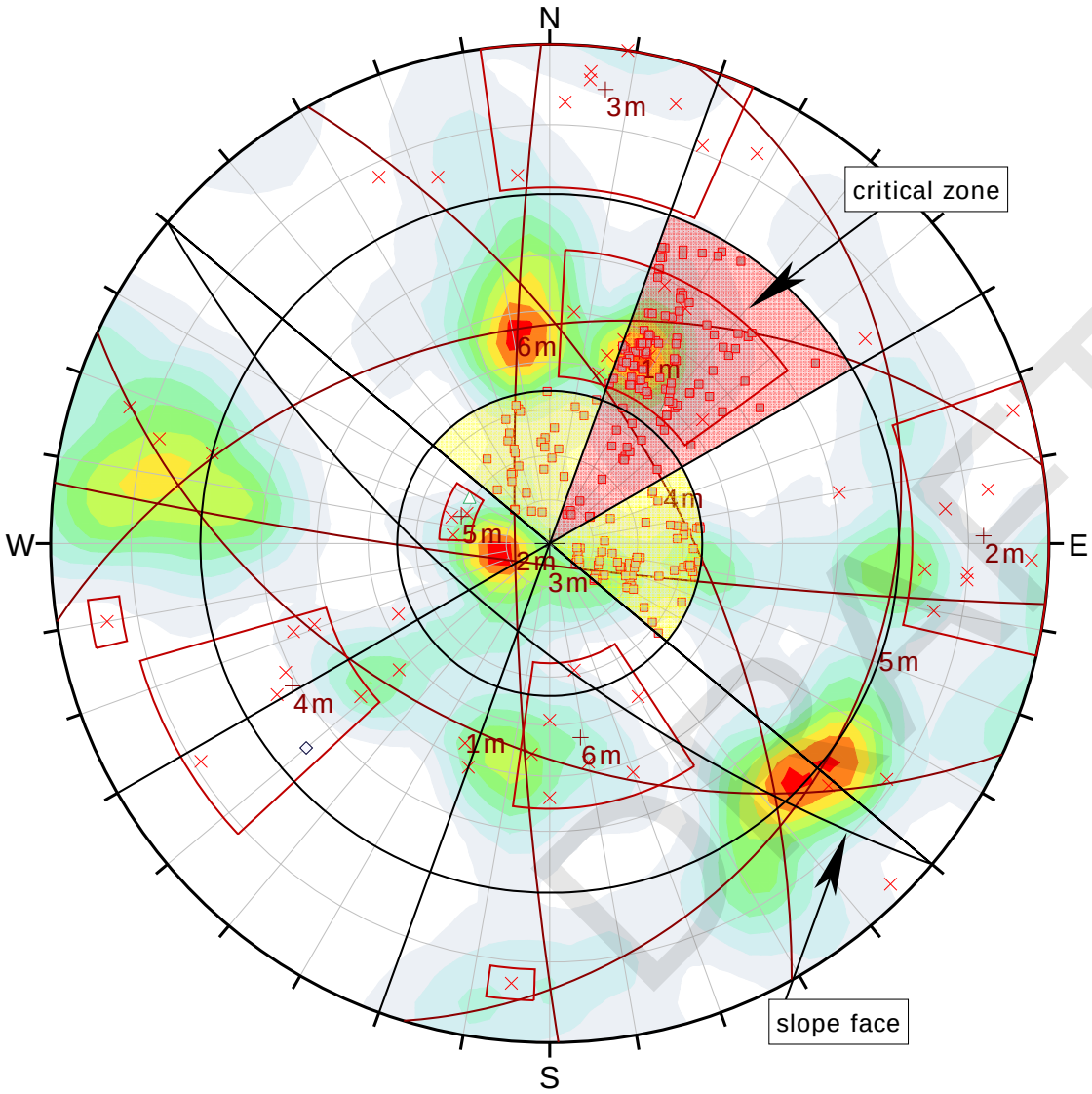
Kinematic Analysis	Wedge Sliding
Slope Dip	70
Slope Dip Direction	220
Friction Angle	34°

	Critical	Total	%
Wedge Sliding	389	1770	21.98%

Plot Mode	Dip Vectors
Vector Count	60 (60 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	1770
Hemisphere	Lower
Projection	Equal Angle

Project	Nichols Road		
Analysis Description	Wedge Sliding - Dip Vectors		
Drawn By	CHJ	*Author*	JMc
File Name	wedge 220_70 vectors Nichols.dips6	*Date*	3/18/2015
		Enclosure	B-3.3

DIPS 6.008



Symbol	TYPE	Quantity
◇	f	1
×	j	57
△	s	2

Symbol	Feature
■	Critical Intersection

Color	Density Concentrations
	0.00 - 0.45
	0.45 - 0.90
	0.90 - 1.35
	1.35 - 1.80
	1.80 - 2.25
	2.25 - 2.70
	2.70 - 3.15
	3.15 - 3.60
	3.60 - 4.05
	4.05 - 4.50

Maximum Density	4.25%
Contour Data	Intersections
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Direct Toppling
Slope Dip	70
Slope Dip Direction	220
Friction Angle	34°
Lateral Limits	20°

	Critical	Total	%
Direct Toppling (Intersection)	139	1770	7.85%
Oblique Toppling (Intersection)	98	1770	5.54%
Base Plane (All)	7	60	11.67%
Base Plane (Set 1)	7	10	70.00%

Plot Mode	Pole Vectors
Vector Count	60 (60 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	1770
Hemisphere	Lower
Projection	Equal Angle

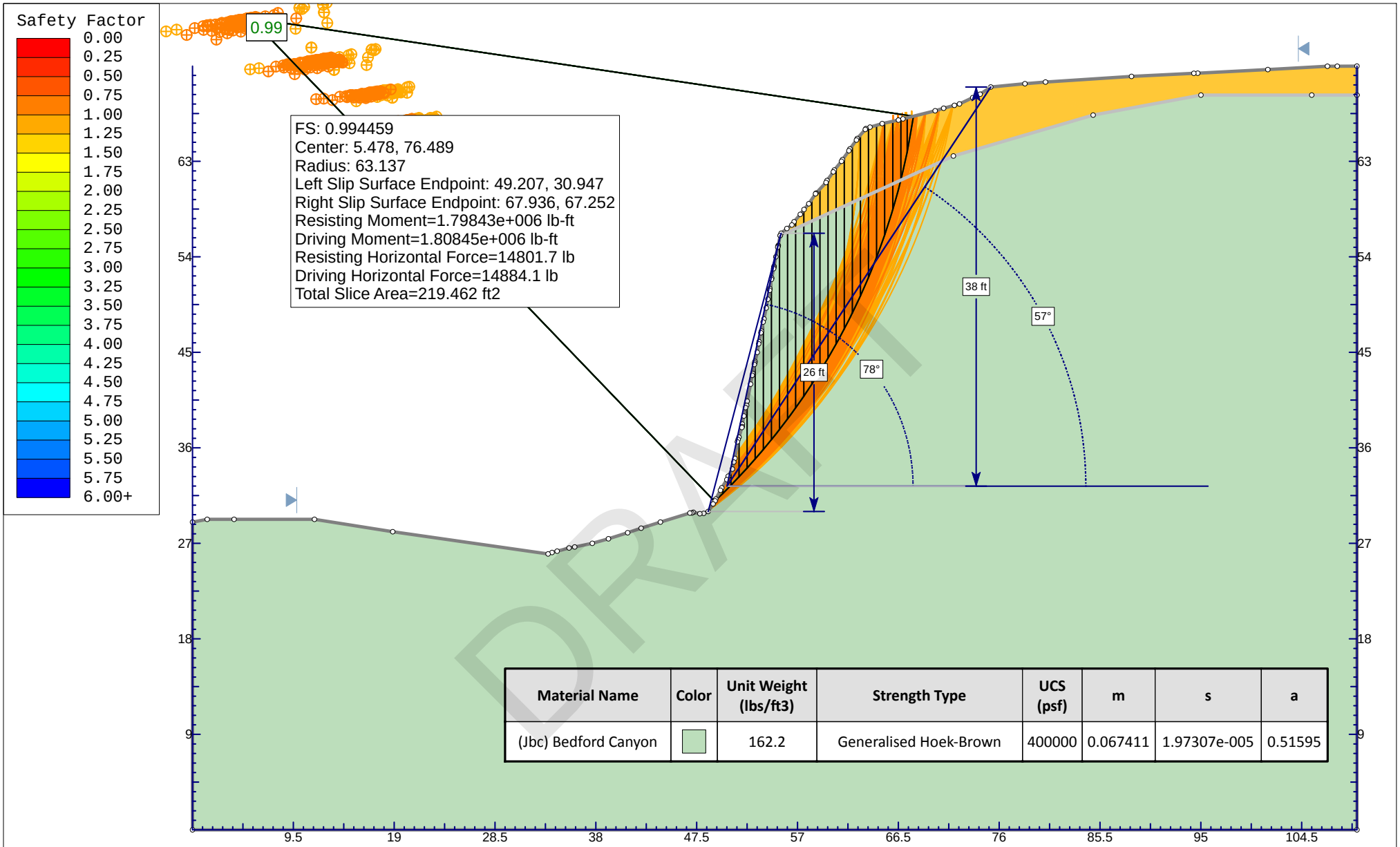
DIPS 6.008

Project	Nichols Road		
Analysis Description	Topple - Pole Vectors		
Drawn By	CHJ	*Author*	JMc
File Name	topple 220_70 poles Nichols.dips6	*Date*	3/18/2015
Enclosure	B-3.4		

APPENDIX C

GLOBAL STABILITY CALCULATIONS

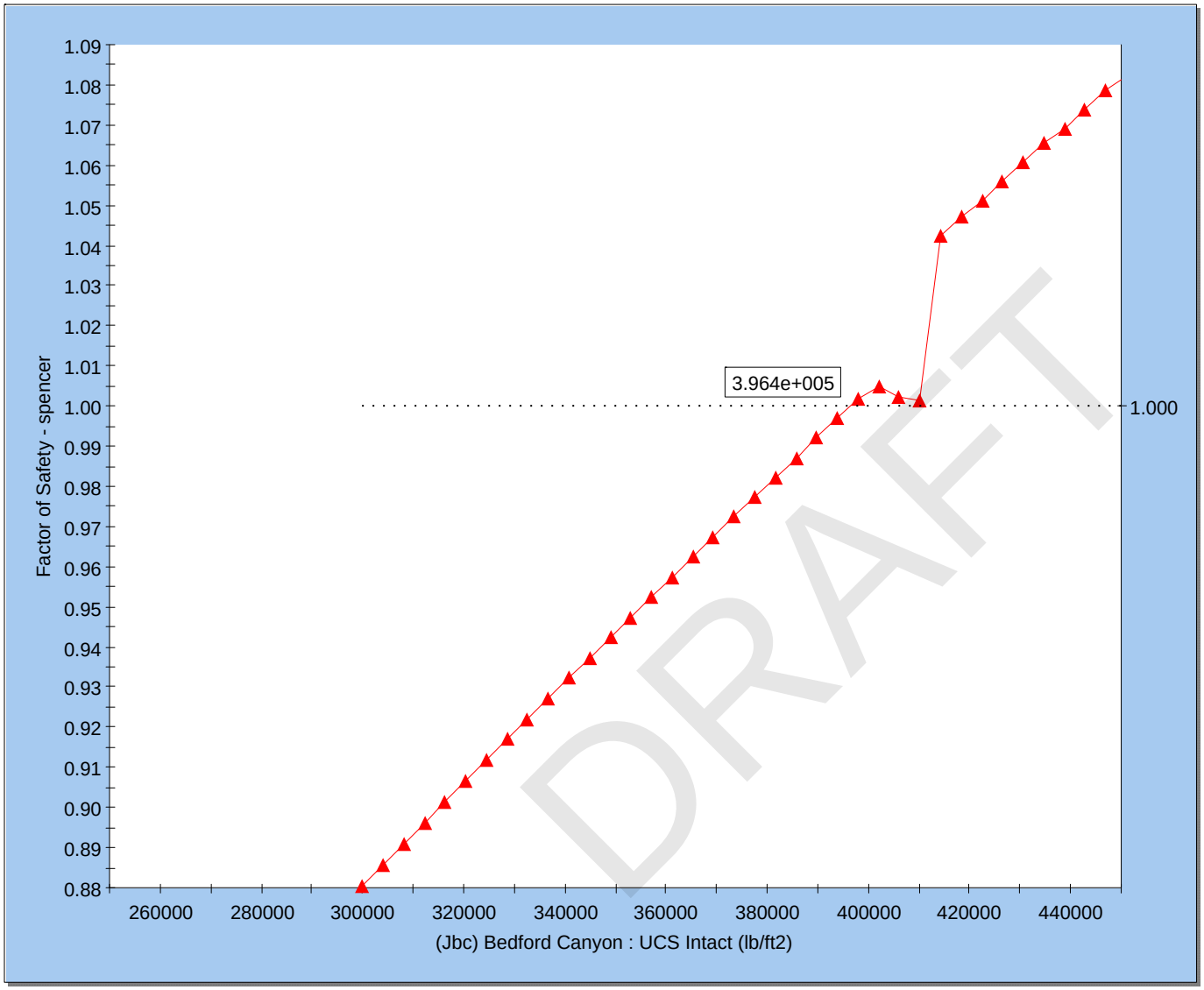
DRAFT



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	UCS (psf)	m	s	a
(Jbc) Bedford Canyon		162.2	Generalised Hoek-Brown	400000	0.067411	1.97307e-005	0.51595

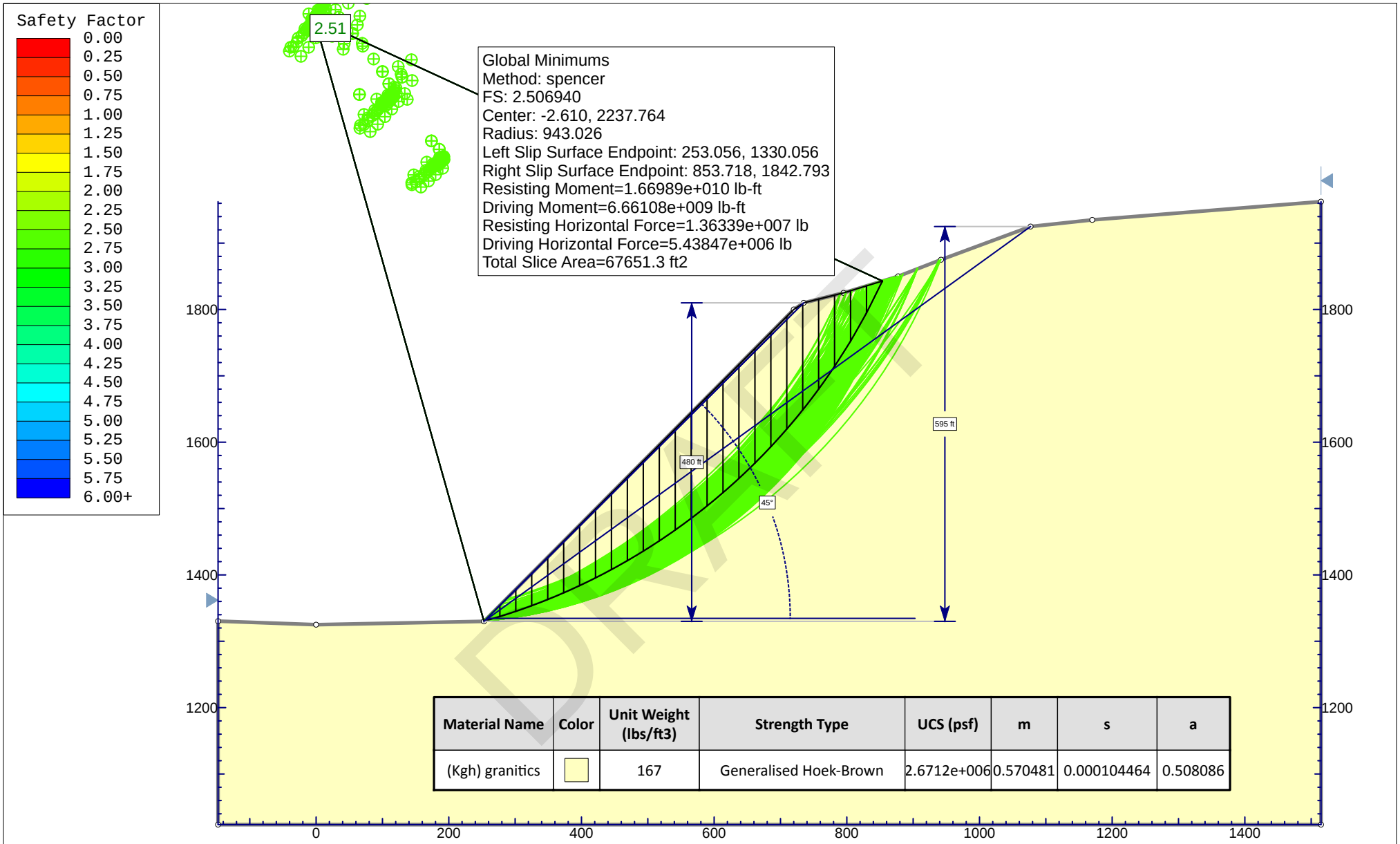
SLIDEINTERPRET 6.034

Project	Back Calculation from Corona Clay site		
Analysis Description	Existing Slope in Jbc Unit		
Drawn By CHJ	*Author* JMc	*Scale* 1:150	
File Name BC1 Hoek model wi fill.slim	*Date* March 2015	*Enclosure* C-1.1	



(Jbc) Bedford Canyon : UCS Intact (lb/ft2)

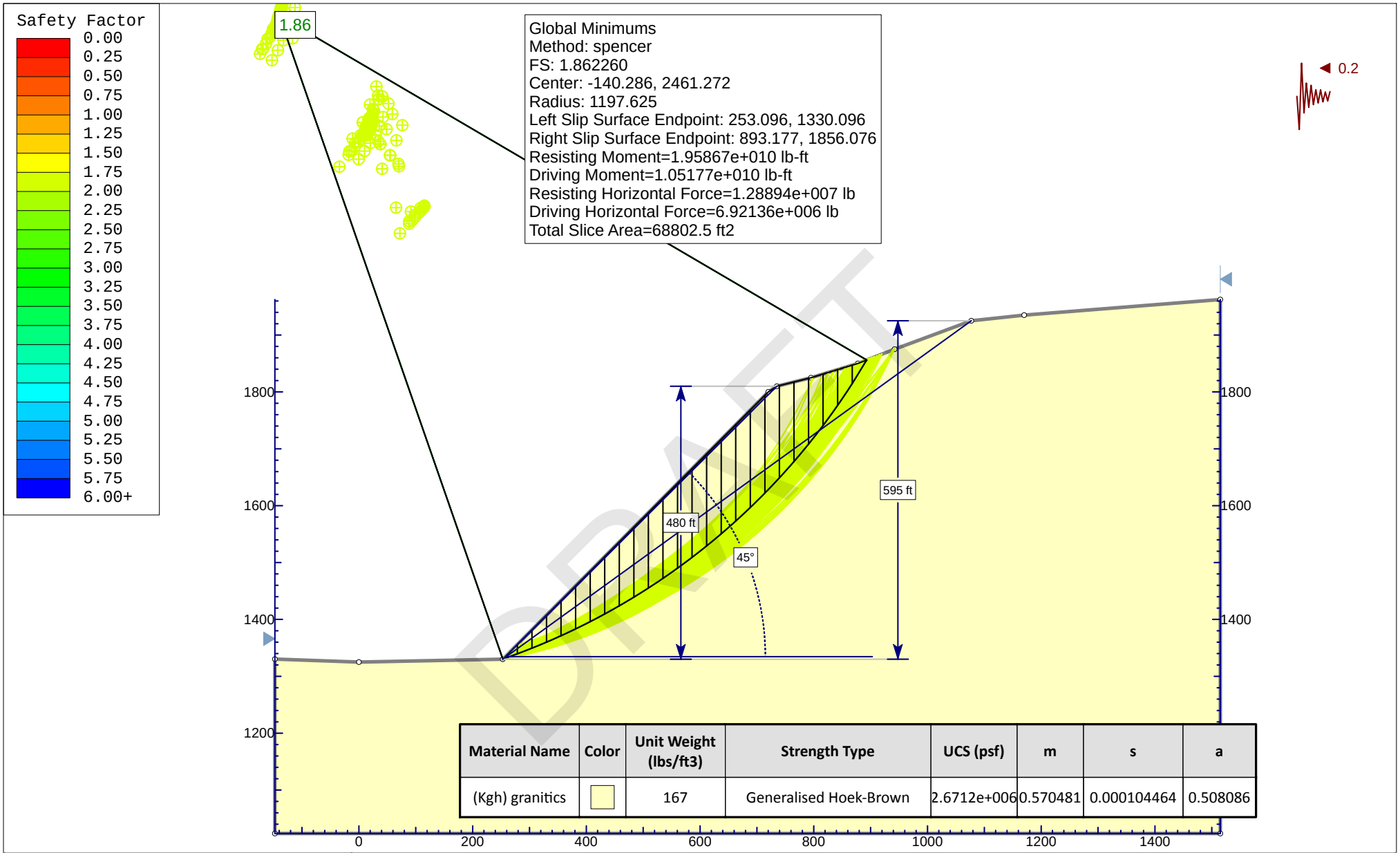
SLIDEINTERPRET 6.034	Project: Back Calculation of Existing Slope in Jbc unit		
	Analysis Description		
	Drawn By: CHJ	Author: JMc	Scale
	File Name: BC1 Hoek model.slim	Date: March 2015	Enclosure: C-1.2



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	UCS (psf)	m	s	a
(Kgh) granitics		167	Generalised Hoek-Brown	2.6712e+006	0.570481	0.000104464	0.508086

SLIDEINTERPRET 6.034

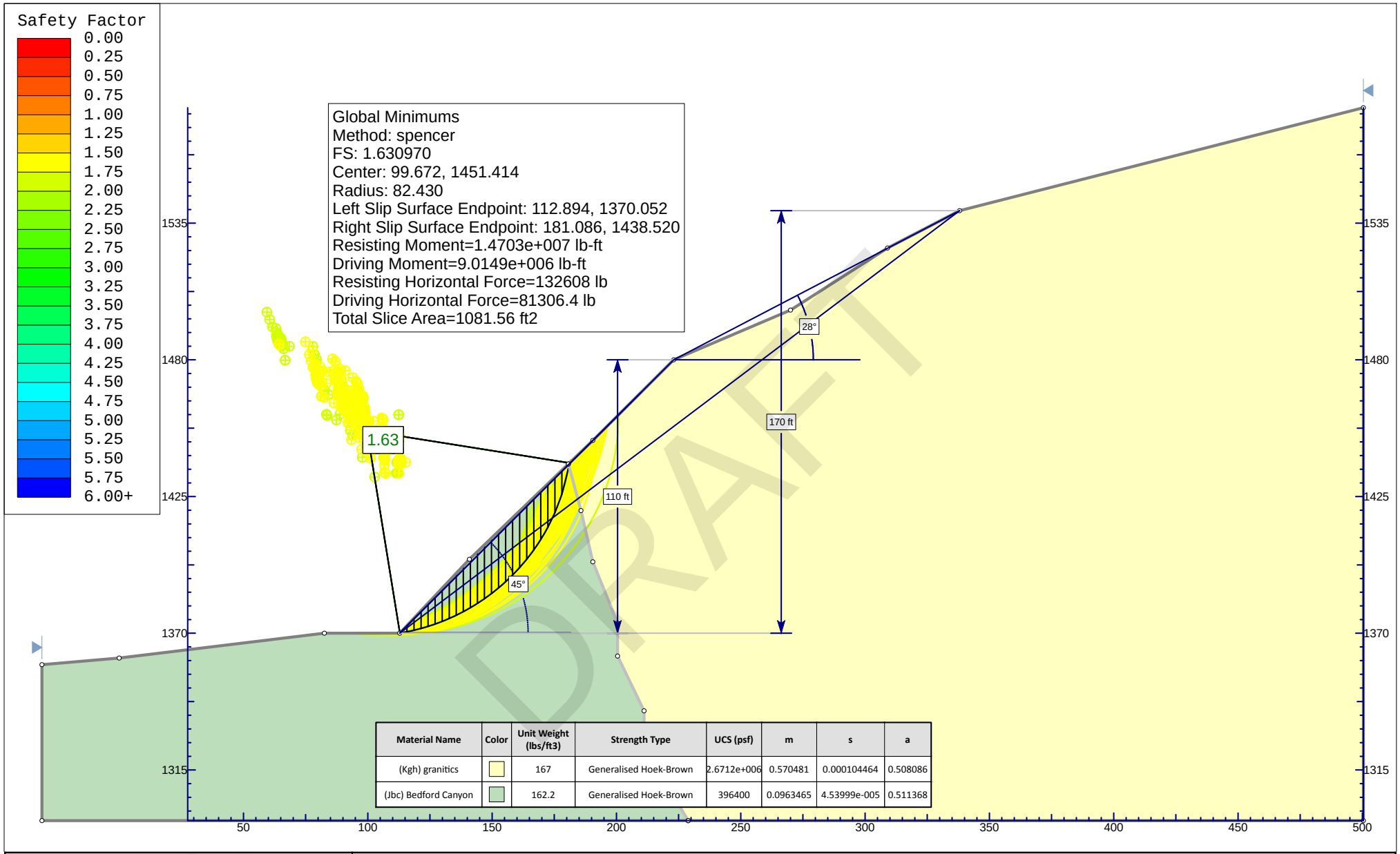
Project	Nichols Road		
Analysis Description	Section A		
Drawn By	CHJ	Author	JMc	Scale	1:2400
File Name	SectA model.slim	Date	March 2015	Enclosure	C-2.1



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	UCS (psf)	m	s	a
(Kgh) granitics		167	Generalised Hoek-Brown	2.6712e+006	0.570481	0.000104464	0.508086

SLIDEINTERPRET 6.034

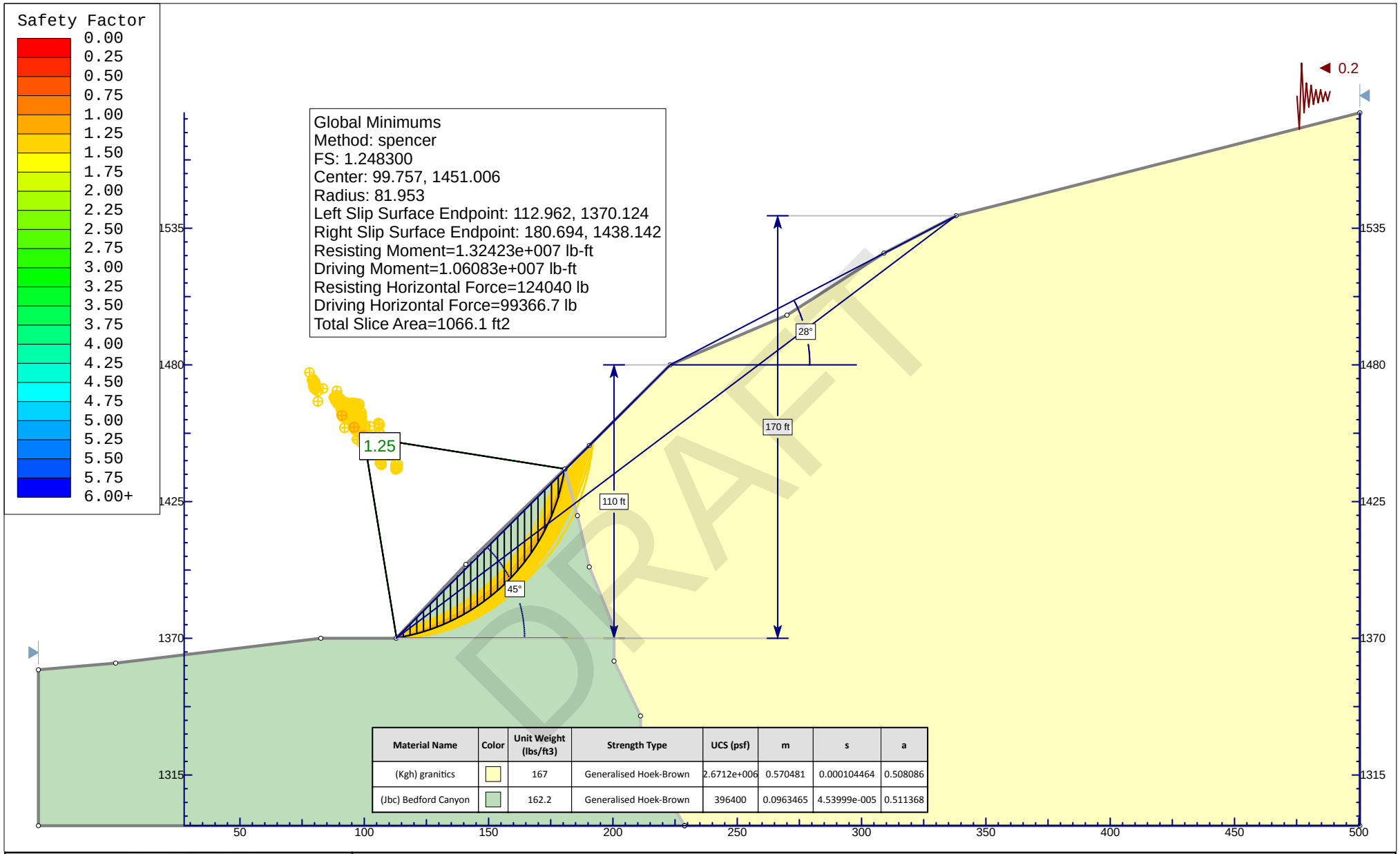
Project	Nichols Road		
Analysis Description	Section A		
Drawn By	CHJ	*Author* JMc	*Scale* 1:2800
File Name	SectA seis.slim	*Date* March 2015	*Enclosure* C-2.2



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	UCS (psf)	m	s	a
(Kgh) granitics		167	Generalised Hoek-Brown	2.6712e+006	0.570481	0.000104464	0.508086
(Jbc) Bedford Canyon		162.2	Generalised Hoek-Brown	396400	0.0963465	4.53999e-005	0.511368

SLIDEINTERPRET 6.034

Project	Nichols Road		
Analysis Description	Section B		
Drawn By	CHJ	*Author* JMc	*Scale* 1:640
File Name	SectB model.slim	*Date* March 2015	*Enclosure* C-3.1



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	UCS (psf)	m	s	a
(Kgh) granitics		167	Generalised Hoek-Brown	2.6712e+006	0.570481	0.000104464	0.508086
(Jbc) Bedford Canyon		162.2	Generalised Hoek-Brown	396400	0.0963465	4.53999e-005	0.511368

SLIDEINTERPRET 6.034

Project	Nichols Road		
Analysis Description	Section B		
Drawn By	CHJ	*Author* JMc	*Scale* 1:640
File Name	SectB seis.slim	*Date* March 2015	*Enclosure* C-3.2

APPENDIX D

SITE PHOTOGRAPHS

DRAFT

Photo 1: Kgh outcrop with dark brown xenoliths.

Photo 2: Kgh outcrop showing west leaning columns and color contrast between fresh (gray) and weathered (brown surfaces).

DRAFT

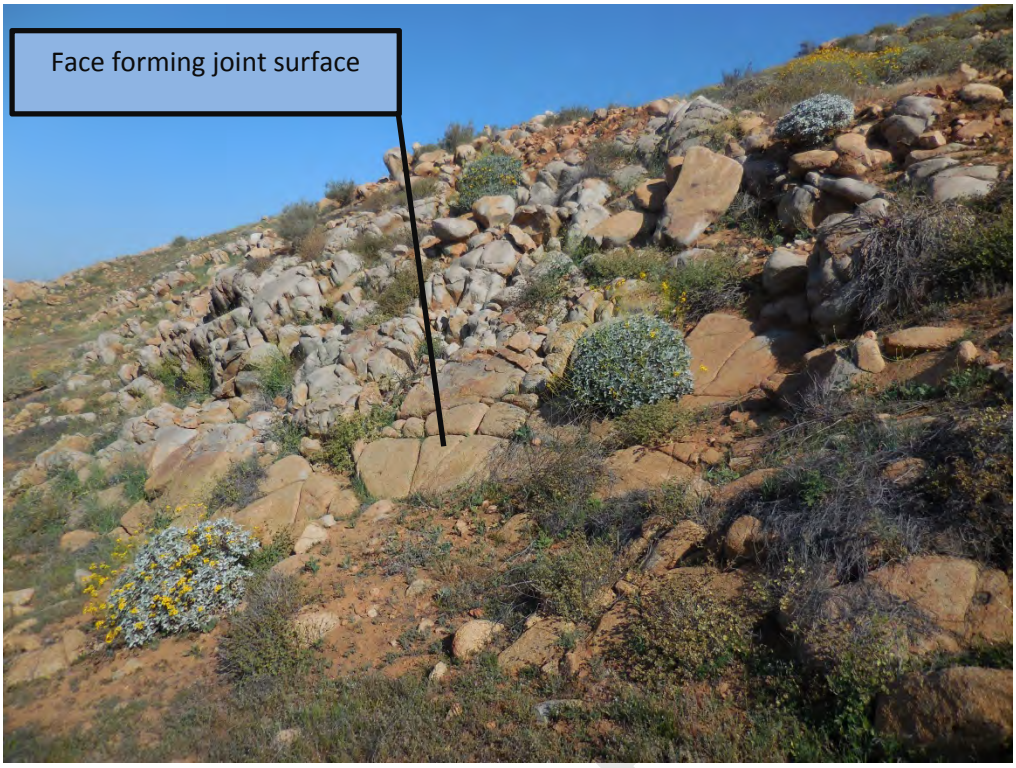


Photo 3: Kgh outcrops with west dipping face cut by orthogonal joint set. .

Photo 4: Outcrop-scale columnar fabric in Kgh.

Photo 5: Outcrop of Bedford Canyon metasediments (Jbc) overlain by colluvium with Kgh clasts.

Photo 6: Boulders of Bedford Canyon metasediments (Jbc) as phyllite.

Photo 7: Overview of native slopes – southeast portion of proposed expansion area.

Photo 8: Overview of expansion area.

DRAFT

Photo 9: Quarry face – Location 6.

DRAFT