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Our ref: PSM71-194R

2 December 2015

OceanaGold Corporation
22 Maclaggan Street
DUNEDIN 9016
NEW ZEALAND

ATTENTION: KNOWELL MADAMBI
Knowell.Madambi@oceanagold.com

Dear Knowell,

RE: GEOTECHNICAL REVIEW OF MACRAES LOM DESIGN 2015

We are pleased to submit our final report in relation to the geotechnical review of the Macraes LOM design. The LOM pit designs were revised to mitigate the geotechnical risks highlighted in the draft version of this report which was issued on the 18th November 2015.

We trust it is in keeping with your requirements but should you have any queries please do not hesitate to contact us.

For and on behalf of
PELLS SULLIVAN MEYNINK

ROBERT BERTUZZI

Distribution: 1 PDF copy to Knowell.Madambi@oceanagold.com
Original held by PSM

OceanaGold

GEOTECHNICAL REVIEW
MACRAES LOM DESIGN 2015

PSM71-194R **December 2015**

EXECUTIVE SUMMARY

This report presents the geotechnical review of revised Macraes' LOM open pits. The recommendations are summarised below.

- The geotechnical model for Coronation North needs to be developed to reduce the uncertainty.
- Safe working procedures to mine above voids and broken or caved rock mass will need to be developed should the proposed FRUG stoping occur before the FRIM Stage 1 pit is completed.

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FIGURES

APPENDICES

1 INTRODUCTION

This report presents the results of a geotechnical review carried out by Pells Sullivan Meynink (PSM) on the Macraes Life of Mine (LOM) pit designs for Coronation North, Coronation, Innes Mills and Frasers pits. The review was requested by Mr Knowell Madambi of OceanaGold to highlight the areas where the pit designs are at risk of geotechnically related instability (Reference 1).

The following pit designs have been supplied for review:

- Coronation North – stages 1 & 2
- Coronation – stages 2 to 4
- Innes Mills – stage 1
- FRIM – stage 1.

This review is of the revised LOM pit designs of Coronation Stage 4, Innes Mills and FRIM which OceanaGold prepared to mitigate the geotechnical risks highlighted in the draft version of this report which was issued on the 18th November 2015.

2 GEOTECHNICAL MODEL AND SLOPE PERFORMANCE

Detailed discussions on the geotechnical model and historical slope performance are presented in last year's LOM review (Reference 2) and are not reproduced here. Pit designs include 15 and 22.5 m batter heights; 5, 7.5 and 11.5 m wide berms; and 50 to 70° batters (Reference 2).

Potential failure mechanisms are summarised in Figure 1.

3 CORONATION NORTH

3.1 Design

The proposed pit at Coronation North is shown in plan in Figures 2 to 4 and in section in Figures 5 and 6. It comprises:

- Generally, 22.5 m high batters and 11.5 m wide berms
- Stage 1 – upper two batters at 50˚, other batters at 60˚
- Stage 2 – 60˚ batters
- Inter-ramp angles of 37˚ to 43˚.

3.2 Risk Assessment

The topography of the area with the steep gorges, the basalt cap and the obvious change in deposit orientation implies that geotechnical conditions are likely to be

different here than in the other pits at Macraes. No structural or geotechnical data exists for Coronation North.

Given the geotechnical uncertainty of the Coronation North area, the base risk is generally higher than for the other pits. However, the pit design produces relatively shallow walls so the risk is generally considered to be moderate. The exception is the south-eastern end of the pit which abuts a steep gorge. A confluence of major lineaments also is inferred to affect this end of the proposed pit.

A detailed review of the qualitative risk for the slope sectors is presented in Appendix A.

3.3 Recommendations

The geotechnical model for Coronation North needs to be developed to reduce the uncertainty of conditions.

- Seven boreholes have been planned to target the proposed pit walls, in particular the south-eastern end of the pit (Reference 3).
- Structural interpretation of major structures needs to be carried out.

4 CORONATION

4.1 Design

The recommended slope design for the Coronation pit comprised (Reference 2):

- The top two 15 m high benches were expected to be in weathered rock mass and hence were to be battered at 50°
- Southern and northern walls
  - 15 m high, 70° batters and 7.5 m wide berms producing a 60 m high 49° (toe to toe) inter-ramp slope
- Eastern and western walls
  - 15 m high, 60° batters and 7.5 m wide berms producing a 60 m high 43° (toe to toe) inter-ramp slope.
- An alternative batter geometry of 22.5 m high batters and 11.5 m wide berms was suggested.

Reviewing the three stages of pit development, which are shown in plan in Figure 7 and in section in Figures 8 to 10, confirms that the designs are in keeping with the above recommendations. Specifically,

- The upper-most batters in the weathered zone are 50°
- Generally 22.5 m high batters and 11.5 m wide berms are used.

4.2 Risk Assessment

4.2.1 East Walls

A number of existing failures on Coronation Stage 1 east walls have been caused by north-south trending, westerly dipping faults (Reference 4). The instability associated with these structures includes wedge failures and cracking. As these faults are expected to be continuous at pit scale, it is likely that the east walls of the proposed Stage 2 and 3 pits will also experience instability.

A number of unfavourably oriented slope sectors for Coronation east walls are included in Stages 2 and 3. These slope sectors are at risk of wedge and planar failure from north-south trending moderately west dipping fault and shear structures. They are identified in Appendix B and shown in Figures 11 to 12 as having a high risk of instability.

Figure 7 shows that Fault B may also influence the stability of east walls. This structure does however dip to the east and therefore into the wall.

- Fault B is generally located behind the eastern wall of Stage 2 however, the distance varies from daylighting to approximately 200 m
- Fault B strikes obliquely across the eastern wall of Stage 3. Localised bench scale failures can occur particularly if moderate west dipping fault and shear structures are also present.

4.2.2 West Walls

The west walls generally follow the Hanging Wall Shear (HWS) and are off-set at least 50 m from the Footwall Fault (FF) for each stage, refer to the sections in Figures 8 to 10. Past experience indicates that this off-set distance does not result in significant displacements along the FF. The FF is therefore not likely to pose a major risk to the stability of Coronation west walls.

Fault B poses a minor risk to the stability of the access road on the western wall of Stage 4. This fault strikes obliquely across the western wall, outcrops along the access road and its dip is also sympathetic to design batter angles. There is a risk of failure though as the slope angles are shallow, the risk is considered low.

A detailed review of the qualitative risk for each slope aspect is presented in Appendix B.

4.3 Recommendations

The impact of the north-south trending faults on the stability of the east wall is known by OceanaGold. It is understood that this risk is being managed by the day-to-day mining operations.

Geotechnical face mapping of east walls is recommended to facilitate the design of future cutbacks and pits.

5 INNES MILLS PIT

5.1 Design

The recommended slope design for the Innes Mills pit comprised (Reference 2):

- The top two 15 m high benches were expected to be in weathered rock mass and were to be battered at 50°
- Northern wall
  - 15 m high, 70° batters and 7.5 m wide berms producing a 60 m high 49° (toe to toe) inter-ramp slope
- Southern, eastern (avoid slopes facing between 255-295°) and western walls
  - 15 m high, 60° batters and 7.5 m wide berms producing a 60 m high 43° (toe to toe) inter-ramp slope
- The backfill is largely loosely dumped waste material so its slope is at a 37° angle of rill.

Reviewing the proposed pit development indicates that the design is in keeping with the above recommendations.

The proposed pit design is shown in plan in Figure 13 and in section in Figure 14.

5.2 Risk Assessment

The west wall is off-set more than 50 m from the FF (Figure 14). Therefore, no significant displacement of the west wall along the FF is expected.

A detailed review of the qualitative risk for the slope sectors is presented in Appendix C.

5.3 Recommendations

There are no specific recommendations for the proposed Innes Mills pit.

6 FRIM

6.1 Design

The recommended slope designs for the FRIM pit are (Reference 2):

- The top two 15 m high benches are expected to be in weathered rock mass and are to be battered at 50°
- Northern wall
  - adjacent to, and within 50 m of, the MFZ
    - 15 m high, 60° batters and 7.5 m wide berms producing a 60 m high 43° (toe to toe) inter-ramp slope

- away from the MFZ
  - 15 m high, 70° pre-split batters and 5 m wide berms in the psammite-rich rock mass which overlies the HWS
  - in the more pelitic rock mass which occurs closer to the HWS, say within 75 m perpendicular offset to the HWS, adopt 60° batters

- Southern wall
  - 15 m high, 85° pre-split batters and 5 m wide berms in the psammite-rich rock mass which overlies the HWS
  - in the more pelitic rock mass which occurs closer to the HWS, say within 75 m perpendicular offset to the HWS, adopt 75° batters
- Eastern (avoid slopes facing between 255-295°) and western walls
  - 15 m high, 60° batters and 7.5 m wide berms producing a 60m high 43° (toe to toe) inter-ramp slope.

Reviewing the proposed pit development, which is shown in plan in Figure 15 and in section in Figures 16 to 20, indicates that the design is in keeping with the recommendations. The cross sections also include current and proposed developments in Frasers Underground (FRUG). Perspective views of the proposed stoping are also shown in Plates 1 and 2.

The minimum off-set of the proposed stoping from FRIM Stage 1 pit slopes is 40 m, and the minimum off-set of any FRUG is 10 m.

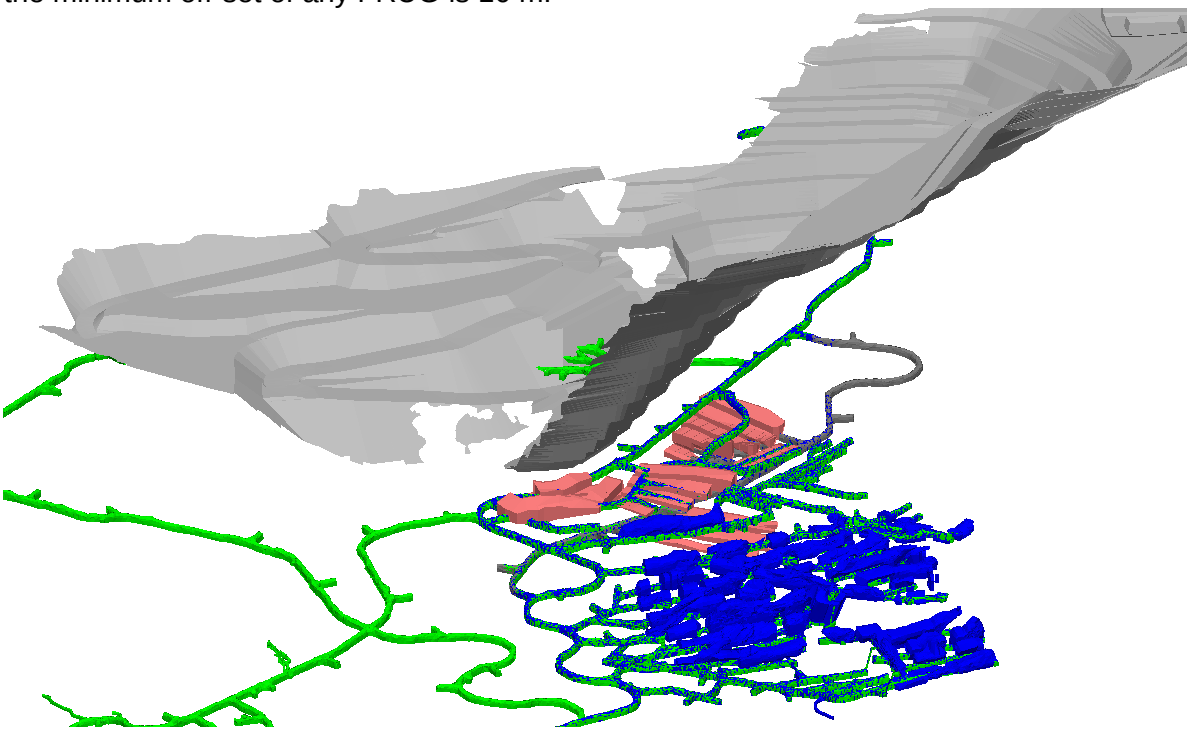


Plate 1: A view from the east towards FRIM Stage 1 (grey) showing the proposed (pink) and existing (blue) stoping.

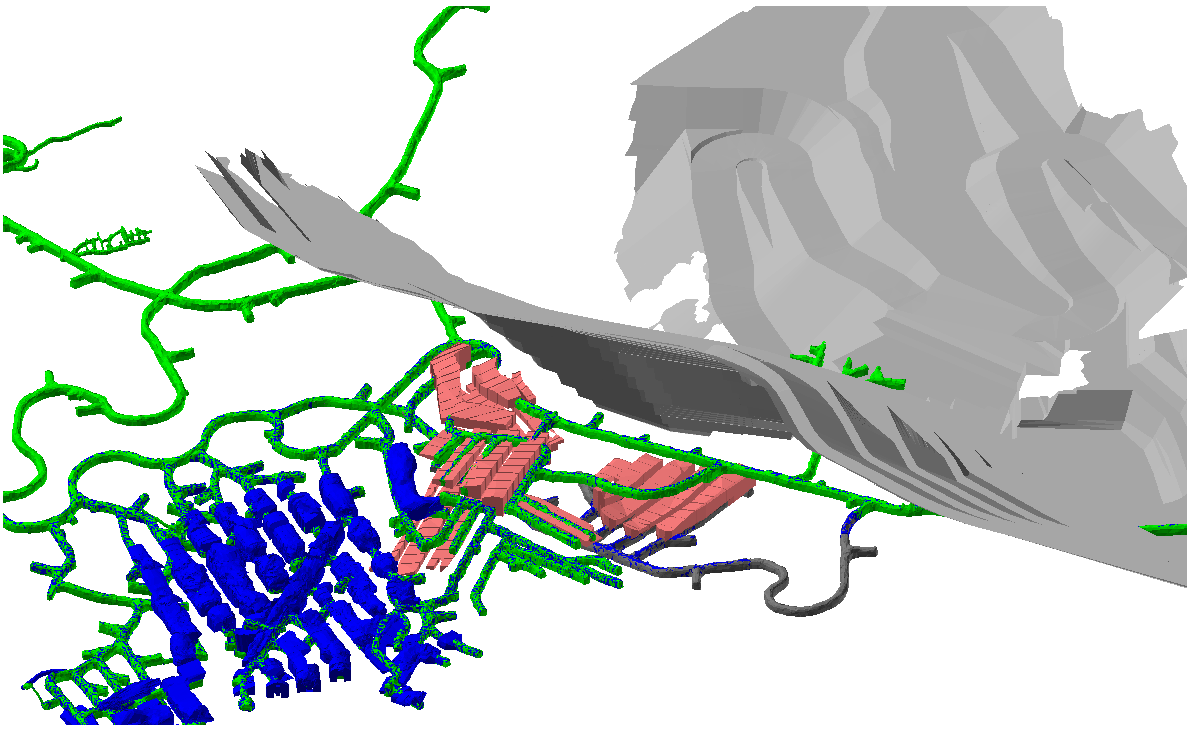


Plate 2: A view from the north towards FRIM Stage 1 (grey) showing the proposed (pink) and existing (blue) stoping.

6.2 Risk Assessment

A recent report assessed the impact of FRUG workings on the proposed Frasers 6 pit (Reference 5). Unlike Frasers 6, the FRIM Stage 1 pit does not cut into FRUG workings. However, some interaction is still expected specifically:

- Slope stability affected by proposed stoping
- Working above broken or caved rock mass.

Table 1 summarises the risk assessment of the potential for interaction between FRIM pit slopes and FRUG. Two scenarios were considered:

1. FRIM Stage 1 pit mined before FRUG stopes.
2. FRIM Stage 1 pit mined after FRUG stopes.

These areas are indicated in Figures 18 to 20.

TABLE 1
QUALITATIVE RISK ASSESSMENT
FRUG AND FRIM PIT SLOPE INTERACTION

TIMING OF FRIM STAGE 1	QUALITATIVE RISK
Before FRUG stopes	Low
After FRUG stopes	Moderate

A detailed review of the qualitative risk for the FRIM Stage 1 pit slopes mined before FRUG stopes is presented in Appendix D.

6.3 Recommendations

There are no specific recommendations if the FRIM Stage 1 pit is mined before the FRUG stopes. If that is not the case, then OceanaGold will need to develop safe working procedures to mine above voids and broken or caved rock mass. Suggestions regarding probing etc. are provided in Reference 5.

For and on behalf of
PELLS SULLIVAN MEYNINK

JAMES BEVIS
Senior Engineering Geologist

ROBERT BERTUZZI
Principal

REFERENCES

1. OceanaGold
   Email from Louie Herreno dated 6th October 2015
   Updated in an email from Knowell Madambi dated 27th November 2015

2. Pells Sullivan Meynink
   Geotechnical Review of Macraes LOM Design
   PSM71-130R dated 14th September 2012

3. Pells Sullivan Meynink
   Coronation North Geotech investigation
   Email to Knowell Madambi and Sean Doyle, sent 6th November 2015

4. Pells Sullivan Meynink
   Site Visit 29th-30th September 2015
   PSM71-193R dated 1st October 2015

5. Pells Sullivan Meynink
   Impact of FRUG on Proposed Frasers 6
   PSM71-196L dated 4th November 2015

Typical Section - Pelite and Psammite - East and West Walls

Possible failure mechanisms - WEST

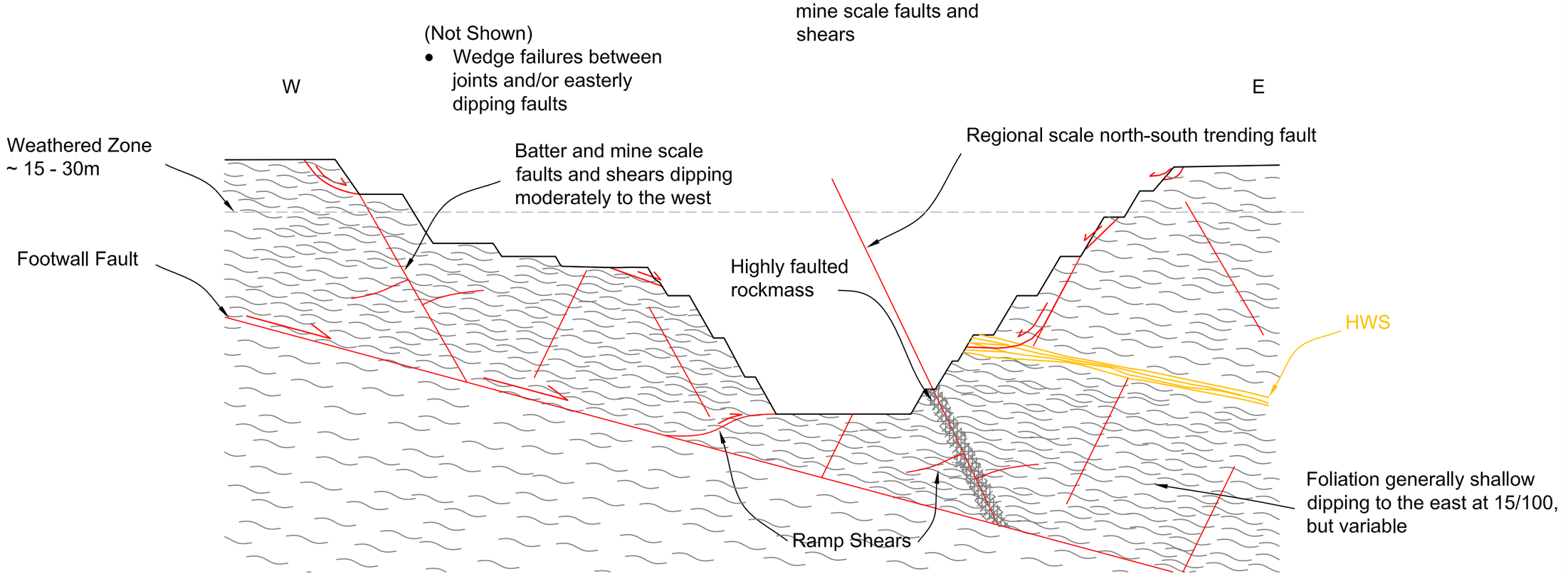
- Circular rock mass failure in weathered zone
- In some localised areas, planar failure along inferred undulating foliation may occur
- Sliding of west walls along FF with break out at toe through rock mass or along existing structure

(Not Shown)
- Wedge failures between joints and/or easterly dipping faults

Possible failure mechanisms - EAST

- Circular rock mass failure in weathered zone
- Planar failure along west dipping faults with breakout at toe through weaker rock mass

(Not Shown)
- Wedge failures associated with steeply dipping joints sets and mine scale faults and shears



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TYPICAL FAILURE MECHANISMS
CROSS SECTION SCHEMATIC

PSM71-194R | Figure 1

CORONATION NORTH

CORONATION

21500N
21100N
20700N
20300N
19900N
19500N
19100N
18700N
68800E
69200E
69600E
70000E
70400E
70800E

LEGEND

- Lineaments
- Fault B
- Fault A
- Coronation North - Stage 1
- Coronation North - Stage 2
- Coronation - Stage 2
- Coronation - Stage 3
- Coronation - Stage 4

0 100 200 300 400 500

Scale (m)

PSM

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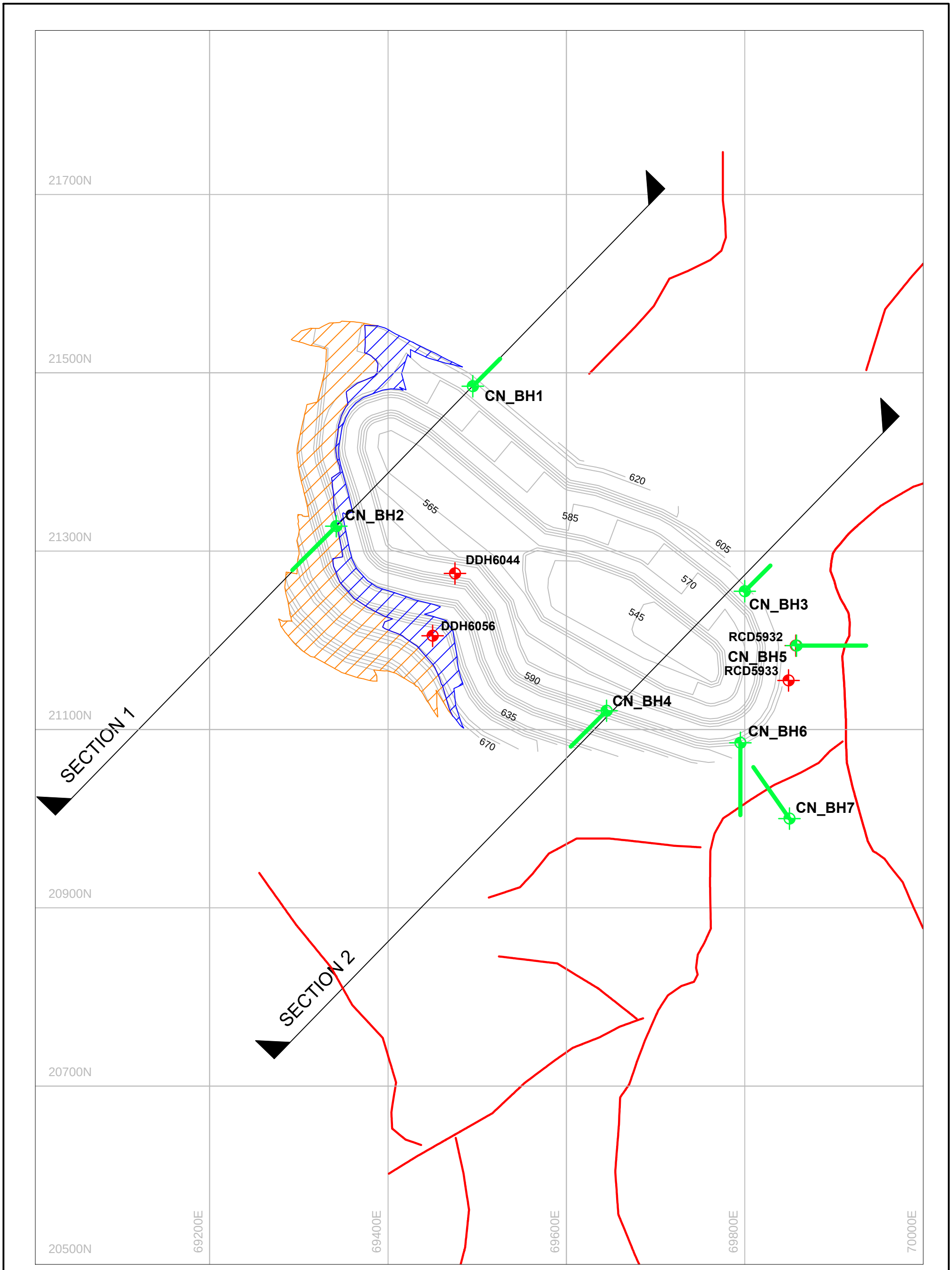
CORONATION AREA
PLAN

PSM71-194R | Figure 2



LEGEND

- Pit Contour
- Basalt
- Sediment
- Gorge Trace
- Proposed Geotech Hole
- Selected Resource Hole

0 50 100
Scale (m)

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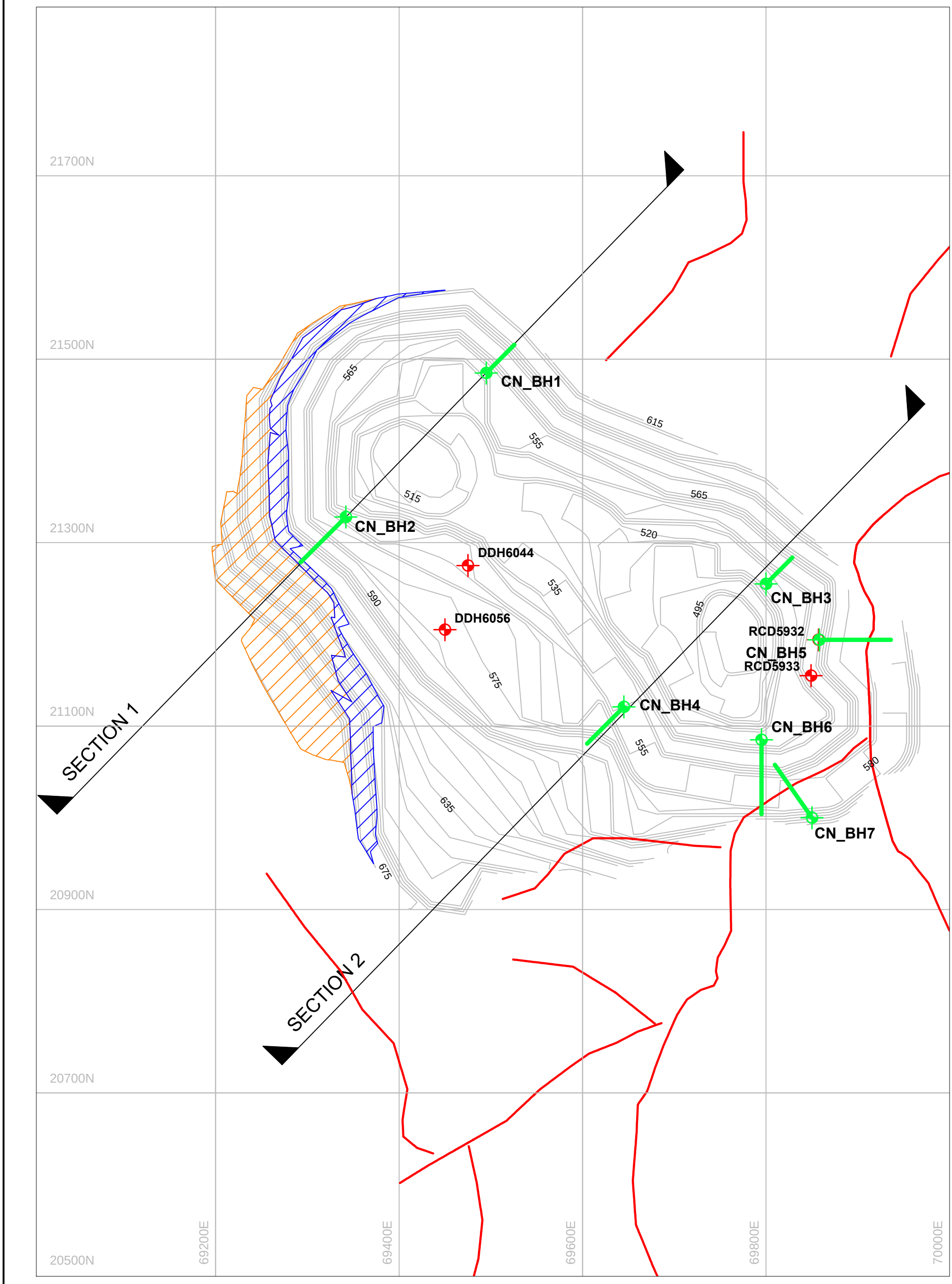
CORONATION NORTH STAGE 1
PIT PLAN

PSM71-194R | Figure 3



LEGEND

- Pit Contour
- Basalt
- Sediment
- Gorge Trace
- Proposed Geotech Hole
- Selected Resource Hole

0 50 100
Scale (m)

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CORONATION NORTH STAGE 2
PIT PLAN

PSM71-194R | Figure 4

WEST

EAST

RL800m

RL700m

RL600m

RL500m

RL400m

CN_BH2

CN_BH1

LEGEND

- Pit Contour - Stage 1
- Pit Contour - Stage 2
- Base of Basalt
- Base of Sediment
- Approximate Base of Weathering

0 50 100

Scale (m)

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CORONATION NORTH PIT
SECTION 1

PSM71-194R | Figure 5

WEST

EAST

RL800m

RL700m

RL600m

RL500m

RL400m

CN_BH4

CN_BH3

LEGEND

- Pit Contour - Stage 1
- Pit Contour - Stage 2
- Base of Basalt
- Base of Sediment
- Approximate Base of Weathering

0 50 100

Scale (m)

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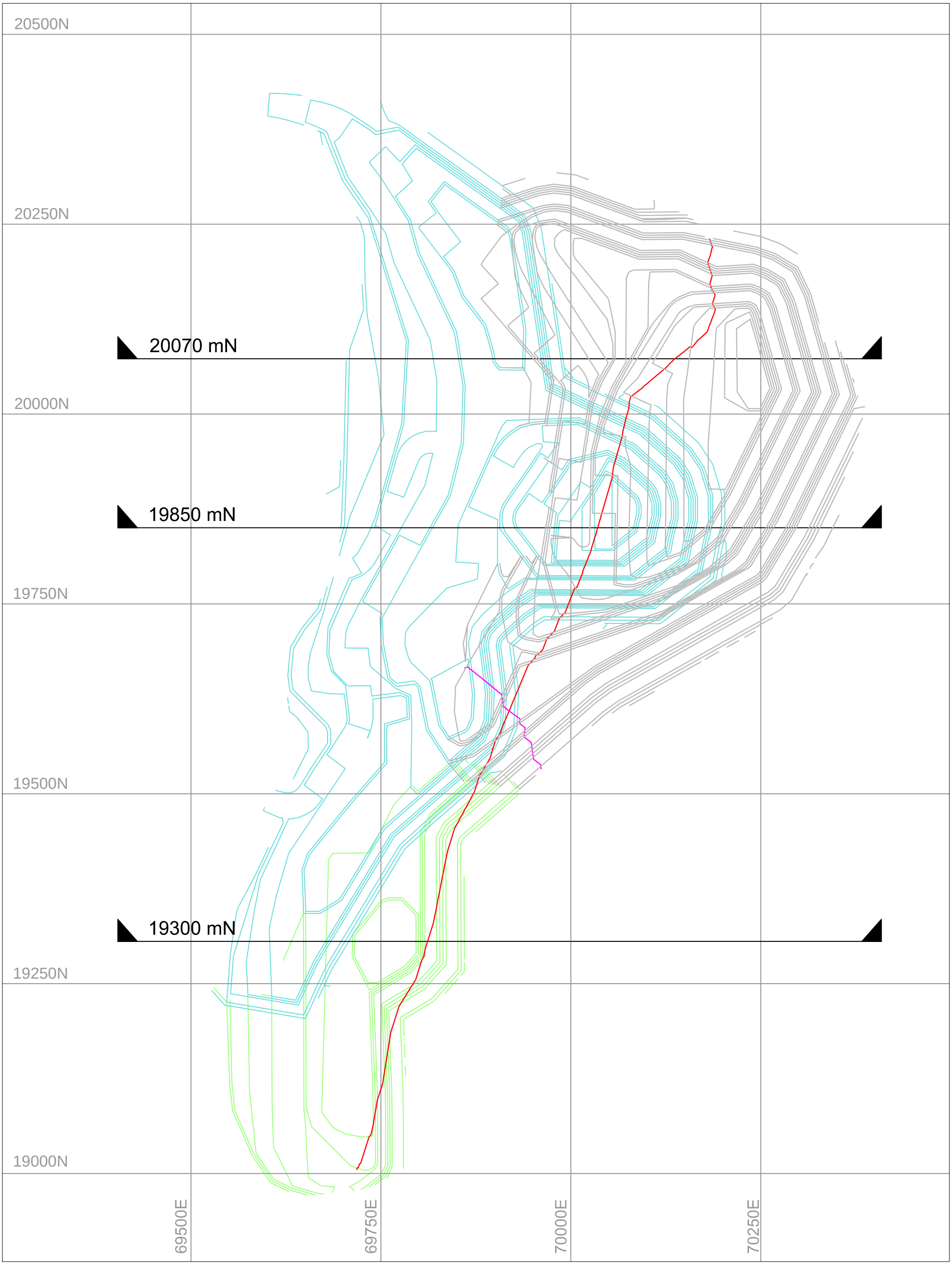
CORONATION NORTH PIT
SECTION 2

PSM71-194R | Figure 6



LEGEND

- Coronation Pit Stage 2
- Coronation Pit Stage 3
- Coronation Pit Stage 4
- Fault A
- Fault B

0 50 100 150 200

Scale (m)

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CORONATION PIT STAGES 2 TO 4
PIT PLAN

PSM71-194R | Figure 7

WEST

EAST

RL800m

RL700m

RL600m

RL500m

RL400m

RL300m

HWS

HWS

FAULT B

FOOTWALL FAULT

LEGEND

Coronation Pit Stage 2

Coronation Pit Stage 3

Coronation Pit Stage 4

Base of Oxidation

0 50 100

Scale (m)

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CORRONATION PIT
SECTION 20070 mN

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Figure 8

WEST

EAST

RL800m

RL700m

RL600m

RL500m

RL400m

RL300m

HWS

HWS

FAULT B

FAULT A

FOOTWALL FAULT

LEGEND

Coronation Pit Stage 2

Coronation Pit Stage 3

Coronation Pit Stage 4

Base of Oxidation

0 50 100

Scale (m)

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CORRONATION PIT
SECTION 19850 mN

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Figure 9

WEST

EAST

RL800m

RL700m

RL600m

RL500m

RL400m

RL300m

HWS

FAULT A

FOOTWALL FAULT

FAULT B

LEGEND

Coronation Pit Stage 2

Coronation Pit Stage 3

Coronation Pit Stage 4

Base of Oxidation

0 50 100

Scale (m)

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CORRONATION PIT
SECTION 19300 mN

PSM71-194R

Figure 10

20500N

20250N

20000N

19750N

19500N

19250N

19000N

69500E

69750E

70000E

70250E

216°

070°

262°

206°

224°

099°

272°

324°

001°

322°

268°

105°

320°

301°

LEGEND

Fault A

Fault B

High risk area — Wedge failure

High risk area — Planar failure

0 50 100 150 200

Scale (m)

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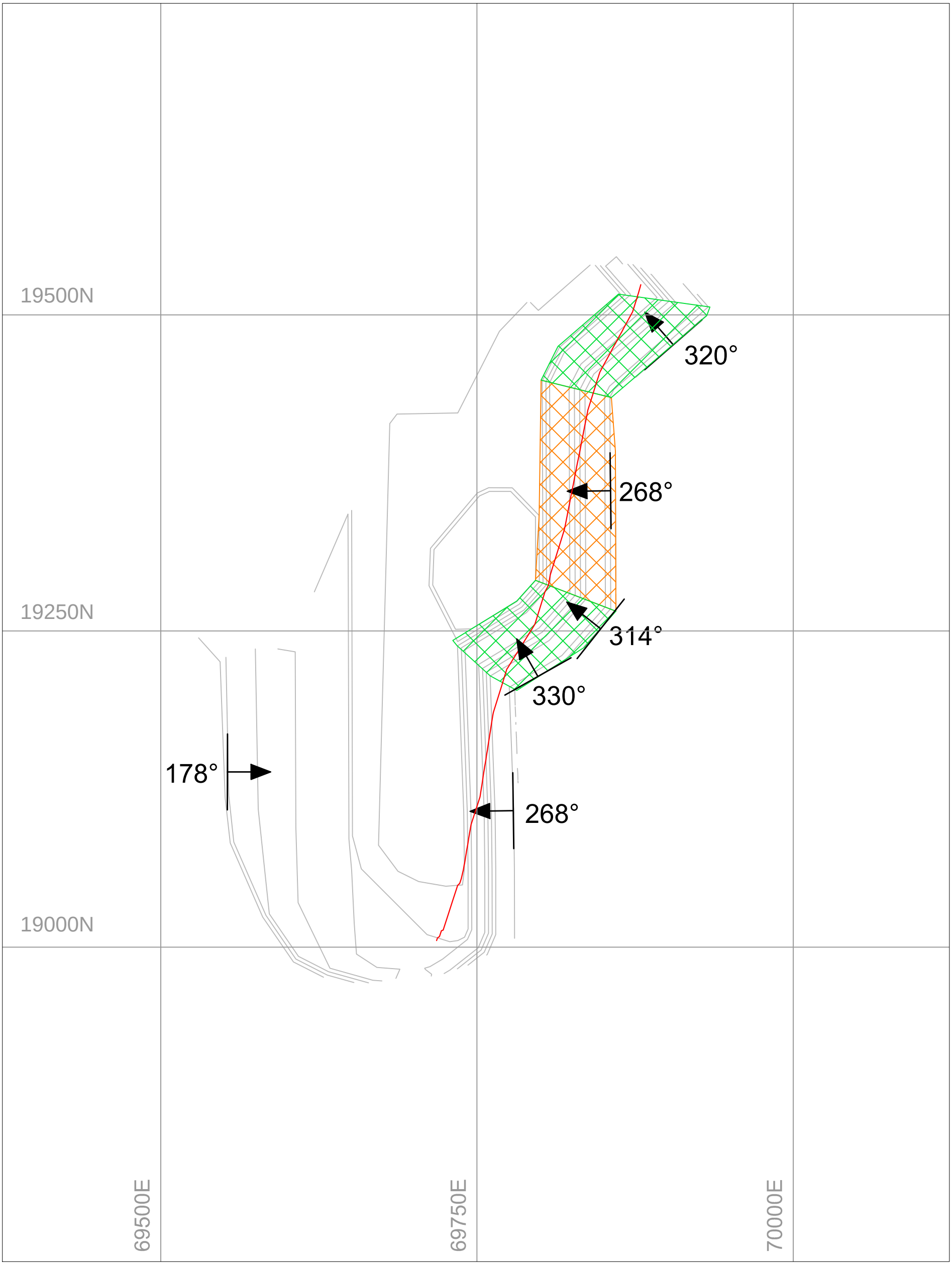
CORONATION PIT STAGE 2
HIGH RISK AREAS

PSM71-194R | Figure 11



LEGEND

- Fault A
- Fault B
- High risk area — Wedge failure
- High risk area — Planar failure

0 50 100
Scale (m)

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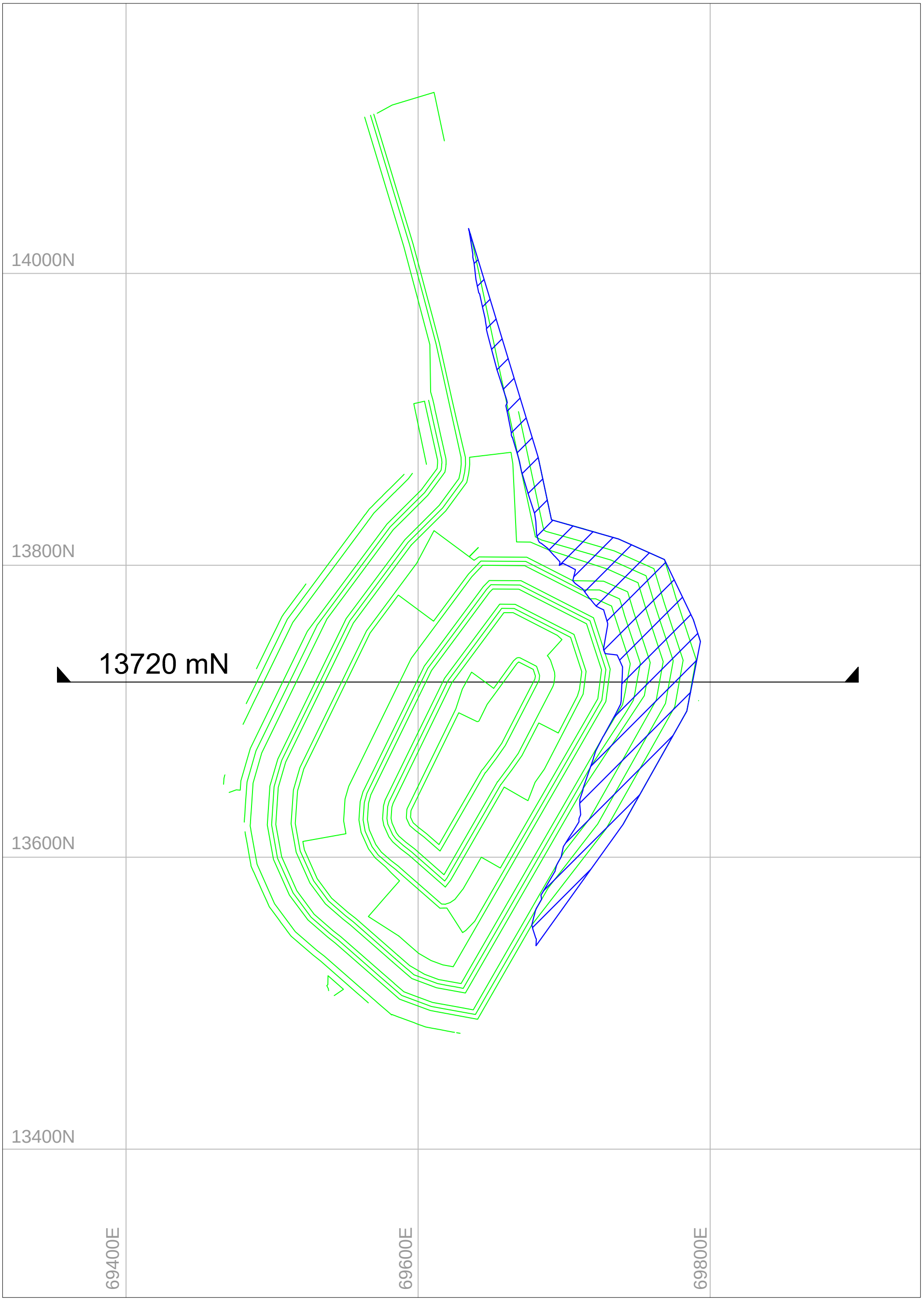
CORONATION PIT STAGE 3
HIGH RISK AREAS

PSM71-194R | Figure 12



LEGEND

Innes Mills Pit Stage 1

Backfill

0 50 100

Scale (m)

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INNES MILLS STAGE 1
PIT PLAN

PSM71-194R | Figure 13

WEST

EAST

RL700m

RL600m

RL500m

RL400m

RL300m

BACKFILL

HWS

FOOTWALL FAULT

LEGEND

INNES MILLS PIT STAGE 1

TOP OF MINED SURFACE

0 50 100

Scale (m)

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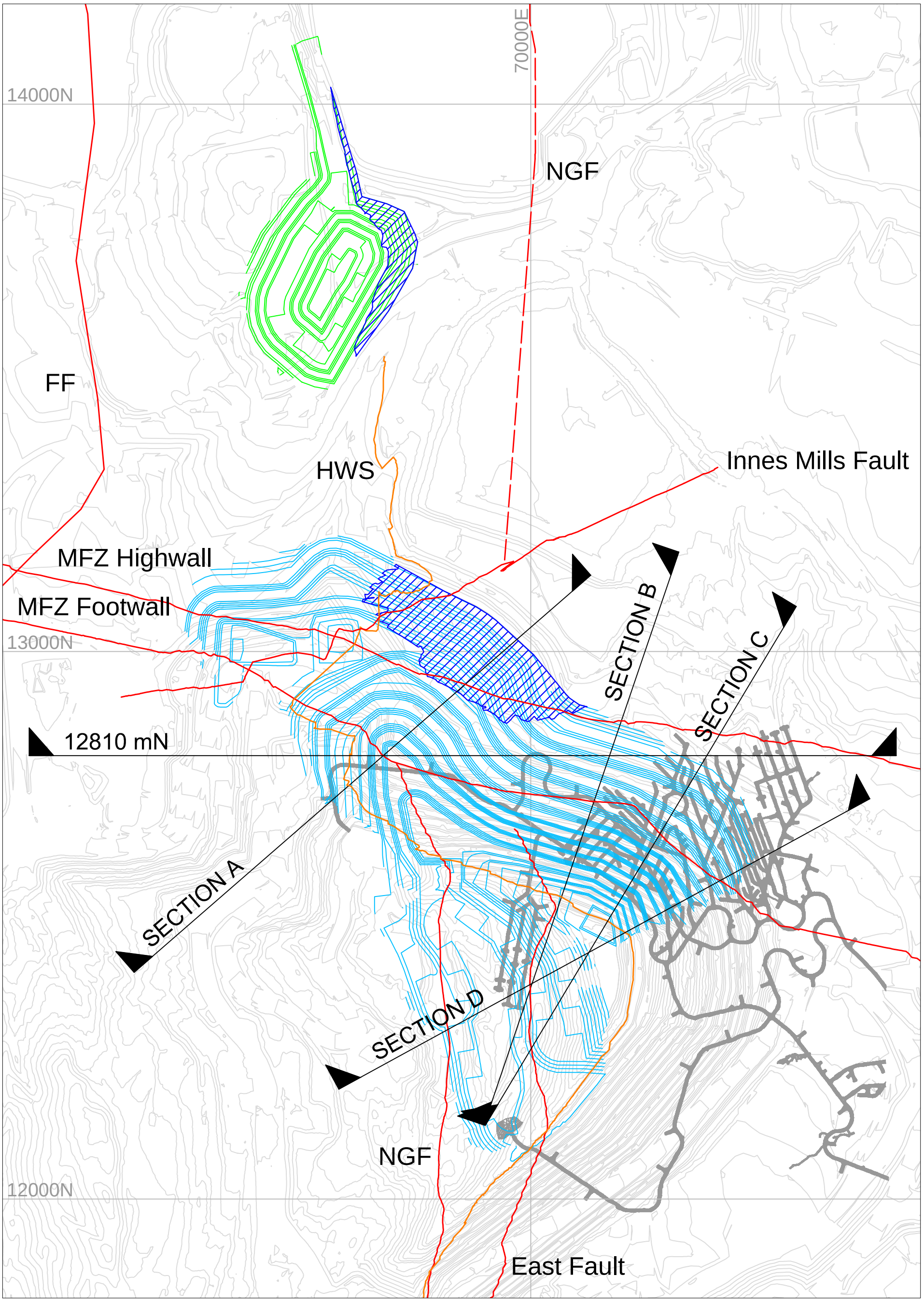
INNES MILLS PIT STAGE 1
SECTION 13720 mN

PSM71-194R | Figure 14



LEGEND

- Innes Mills Pit Stage 1
- FRIM Pit Stage 1
- Backfill

0 100 200 300

Scale (m)

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FRIM STAGE 1
PIT PLAN

PSM71-194R | Figure 15

WEST

EAST

RL700m

RL600m

RL500m

RL400m

RL300m

RL200m

MFZ FOOTWALL

FOOTWALL FAULT

HWS

LEGEND

FRIM PIT STAGE 1

TOP OF MINED SURFACE

FRUG

0 50 100

Scale (m)

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FRIM STAGE 1
SECTION 12810 mN

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Figure 16

WEST

EAST

RL700m

RL600m

RL500m

RL400m

RL300m

RL200m

BACKFILL

INNES MILLS FAULT

MFZ

HWS

FOOTWALL FAULT

LEGEND

FRIM PIT STAGE 1

TOP OF MINED SURFACE

FRUG

0 50 100

Scale (m)

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FRIM STAGE 1
SECTION A

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Figure 17

WEST

EAST

RL600m

RL500m

RL400m

RL300m

RL200m

RL100m

Low risk

338 mRL

Moderate risk of interaction with caved and broken rock mass above proposed stopes

MFZ

HWS

NGF

FOOTWALL FAULT

EAST FAULT

LEGEND

- FRIM PIT STAGE 1
- FRASERS 6
- TOP OF MINED SURFACE
- FRUG
- FRUG 2015
- PLANNED STOPES
- EXISTING STOPES
- PROPOSED BROKEN ROCK MASS ABOVE FRUG STOPES

0 50 100

Scale (m)

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FRIM STAGE 1
SECTION B

PSM71-194R | Figure 18

WEST

EAST

RL600m

RL500m

RL400m

RL300m

RL200m

RL100m

Low risk

338 mRL

Moderate risk of interaction with caved and broken rock mass above proposed stopes

MFZ

FOOTWALL FAULT

HWS

NGF

EAST FAULT

LEGEND

- FRIM PIT STAGE 1
- FRASERS 6
- TOP OF MINED SURFACE
- FRUG
- FRUG 2015
- PLANNED STOPES
- EXISTING STOPES
- PROPOSED BROKEN ROCK MASS ABOVE FRUG STOPES

0 50 100

Scale (m)

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FRIM STAGE 1
SECTION C

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Figure 19

WEST

EAST

RL600m

RL500m

RL400m

RL300m

RL200m

RL100m

Low risk

338 mRL

Moderate risk of interaction with caved and broken rock mass above proposed stopes

FOOTWALL FAULT

NGF

EAST FAULT

HWS

LEGEND

- FRIM PIT STAGE 1
- FRASERS 6
- TOP OF MINED SURFACE
- FRUG
- FRUG 2015
- PLANNED STOPES
- EXISTING STOPES
- PROPOSED BROKEN ROCK MASS ABOVE FRUG STOPES

0 50 100

Scale (m)

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FRIM STAGE 1
SECTION D

PSM71-194R | Figure 20

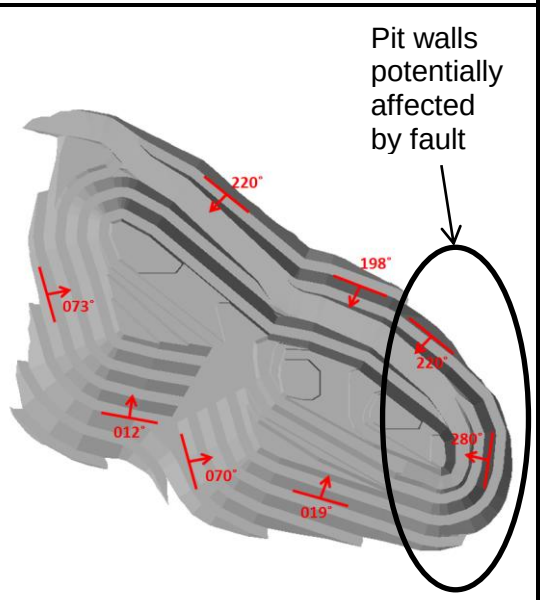
APPENDIX A

QUALITATIVE RISK ASSESSMENT – CORONATION NORTH PIT

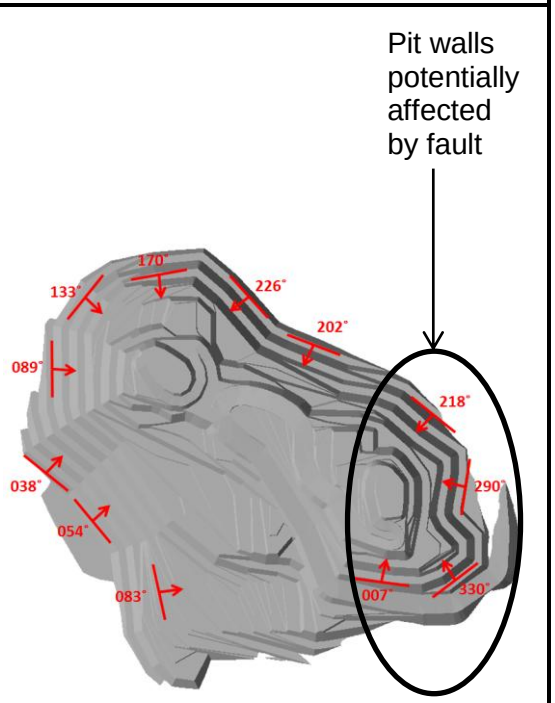
APPENDIX A

QUALITATIVE RISK ASSESSMENT - CORONATION NORTH PIT

APPENDIX A
QUALITATIVE RISK ASSESSMENT – CORONATION NORTH PIT

PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK*	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 1	220	65	50 & 60	22.5	11.3	43	Moderate	
	198	78	50 & 60	18	11.3	39	Moderate	
	220	65	50 & 60	22.5	11.3	43	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	280	58	50 & 60	22.5	11.3	37	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	019	110	50 & 60	22.5	11.3	42	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	070	150	50 & 60	22.5	11.3	37	Moderate	
	012	140	50 & 60	22.5	11.3	41	Moderate	
	073	100	50 & 60	22.5	11.3	42	Moderate	

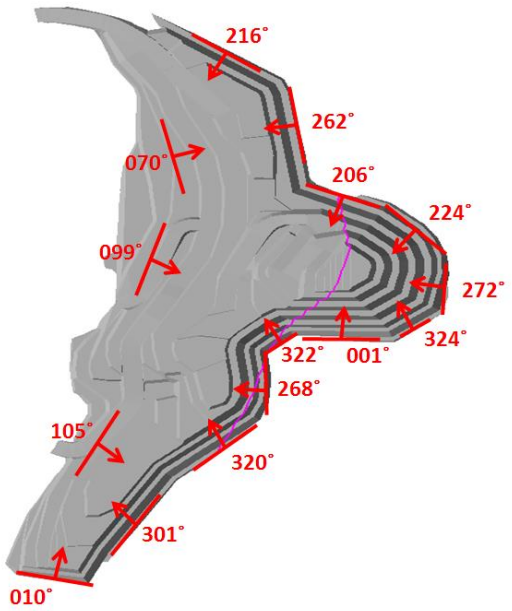
APPENDIX A Cont.
QUALITATIVE RISK ASSESSMENT – CORONATION NORTH PIT

PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK*	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 2	170	102	60	22.5	11.3	42	Moderate	
	226	105	60	22.5	11.3	35	Moderate	
	202	96	60	5 - 22.5	2.5 – 11.3	42	Moderate	
	218	108	60	22.5	11.3	42	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	290	90	60	22.5	7.5 – 11.3	43	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	330	120	60	22.5	11.3	38	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	007	127	60	22.5	11.3	39	High (Major lineaments possibly affecting pit slope sector. See Figures 2 to 5)	
	083	214	60	6.5 - 22.5	2.5 – 11.3	36	Moderate	
	054	178	60	22.5	11.3	42	Moderate	
	038	184	60	22.5	11.3	43	Moderate	
	089	135	60	22.5	11.3	43	Moderate	
	133	118	60	22.5	11.3	40	Moderate	

APPENDIX B

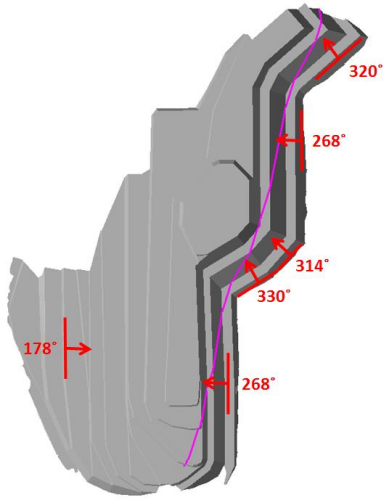
QUALITATIVE RISK ASSESSMENT – CORONATION PIT

APPENDIX B
QUALITATIVE RISK ASSESSMENT – CORONATION PIT

PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 2	216	42	60	22.5	11.3	42	Low	
	262	45	60	22.5	11.3	43	Low	
	206	55 – 98	60	22.5	11.3	42	Low	
	224	104	50 & 60	22.5	11.3	42	Low	
	272	112	50 & 60	22.5	11.3	43	Low	
	324	115	50 & 60	22.5	11.3	41	Low	
	001	104	50 - 70	22.5	11.3	47	Low	
	322	55	50 & 60	22.5	11.3	42	Low	
	268	61	50 & 60	22.5	7.5 - 11	43	Low	
	320	47	50 & 60	15	7.5	41	High - wedge failure associated with N-S trending west dipping faults.	
	301	40	50 & 60	15	7.5	39	Moderate	
	010	28	60	22.5	12.4	43	Low	
	105	28	50 & 60	8	22.3	25	Low	
	099	90	50 & 60	2 – 10	12 – 22.3	15	Low	
	070	45	50 & 60	2 – 10	15 – 32	15	Low	

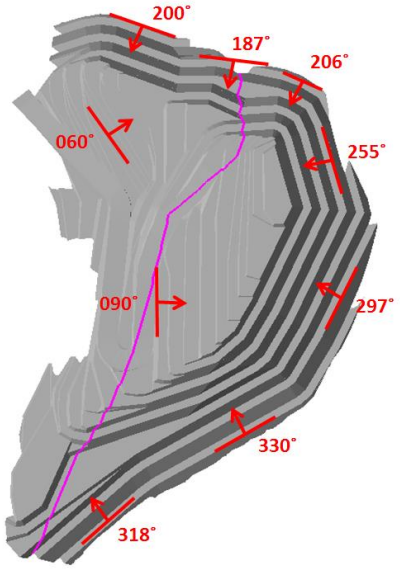
N.B. Fault B represented by magenta line.

APPENDIX B Cont.
QUALITATIVE RISK ASSESSMENT – CORONATION PIT

PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 3	320	51	50 & 60	22.5	11.3	40	High (Possible wedge failure associated with N-S trending west dipping faults	
	268	60	50 & 60	22.5	11.3	42	High (Possible planar failure associated with N-S trending west dipping faults)	
	314	58	50 & 60	22.5	11.3	42	High (Possible wedge failure associated with N-S trending west dipping faults)	
	330	55	50 & 60	22.5	11.3	41	High (Possible wedge failure associated with N-S trending west dipping faults)	
	268	44	50 & 60	22.5	7.5	44	Low	
	178	35	60	25.5	7 - 25	11	Low	

N.B. Fault B represented by magenta line.

APPENDIX B Cont.
QUALITATIVE RISK ASSESSMENT – CORONATION PIT

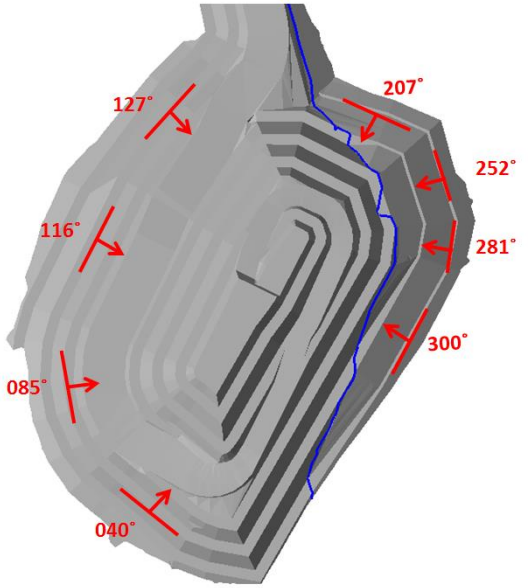
PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 4	200	71	60	22.5	11.3	43	Low	
	187	82	60	22.5	11.3	35	Low	
	206	90	60	22.5	11.3	42	Low	
	255	100	60	22.5	11.3	47	Low	
	297	105	50 - 60	22.5	11.3	44	Low	
	330	150	50 – 70	22.5	11.3	43	Low	
	318	65	50 & 60	8 – 22	8 -33	31	Low	
	090	67	50 & 60	2.5 - 17	14 - 20	16	Low	
	060	32	50 & 60	2.5	8	14	Low	

N.B. Fault B represented by magenta line.

APPENDIX C

QUALITATIVE RISK ASSESSMENT – INNES MILLS PIT

APPENDIX C
QUALITATIVE RISK ASSESSMENT – INNES MILLS PIT

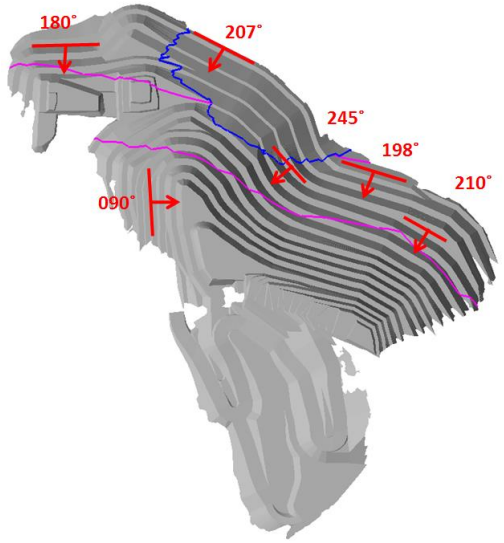
PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 1	207	75	50 & 60	11 – 15	7.5	35	Low	
	252	78	50 & 60	15	7.5	34	Low	
	281	76	50 & 60	15	7.5	36	Low	
	300	75	50 & 60	15	5.5	36	Low	
	040	83	50 & 60	15	7.5	35	Low	
	085	83	50 & 60	15	7.5	35	Low	
	116	97	50 & 60	15	7.5	35	Low	
	127	95	50 & 60	15	7.5	33	Low	

N.B. top of mined surface represented by blue line – backfill to east.

APPENDIX D

QUALITATIVE RISK ASSESSMENT – FRIM PIT

APPENDIX D
QUALITATIVE RISK ASSESSMENT – FRIM PIT

PHASE	SLOPE ASPECT (Azimuth °)	MAXIMUM OVERALL SLOPE HEIGHT (m)	BENCH GEOMETRY			INTER-RAMP ANGLE (°)	QUALITATIVE RISK	LOCATION ON PIT
			BATTER ANGLE (°)	HEIGHT (m)	BERM (m)			
Stage 1	180	85	55	22.5	14	39	Low	
	207	209	37 & 55	22.5	6 & 14	35	Low	
	245	247	37 & 55	22.5	6 & 14	38	Low	
	198	282	55 & 70	22.5	11.3 & 14	43	Low	
	210	288	55 & 70	22.5	11.3 & 14	42	Low	
	090	100	50 & 60	5 - 18	11.3	31	Low	

N.B. MFZ bounded by magenta lines.
Top of mined surface represented by blue line