



AN OVERVIEW OF RESOURCE DRILLING AND MINE DEVELOPMENT AT MOGALAKWENA **2008– 2018**

24 October 2025

Africa Exploration Showcase)

(First presented 16 November 2018– GSSA

Unclassified



IN RECOGNITION

The founders of Northern Limb geology

Hans Merensky



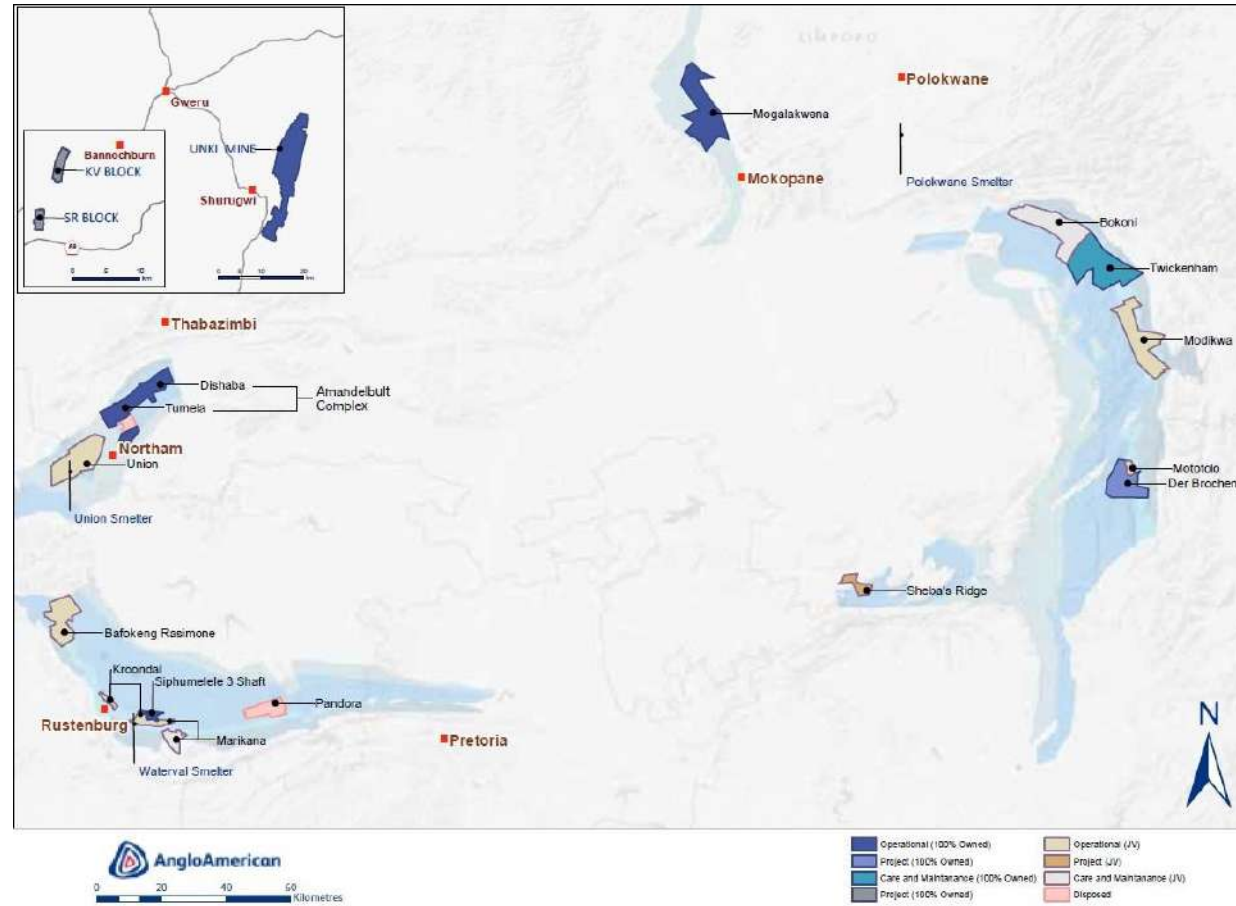
Merensky Archive: Westfalia

Mauritz van der Merwe



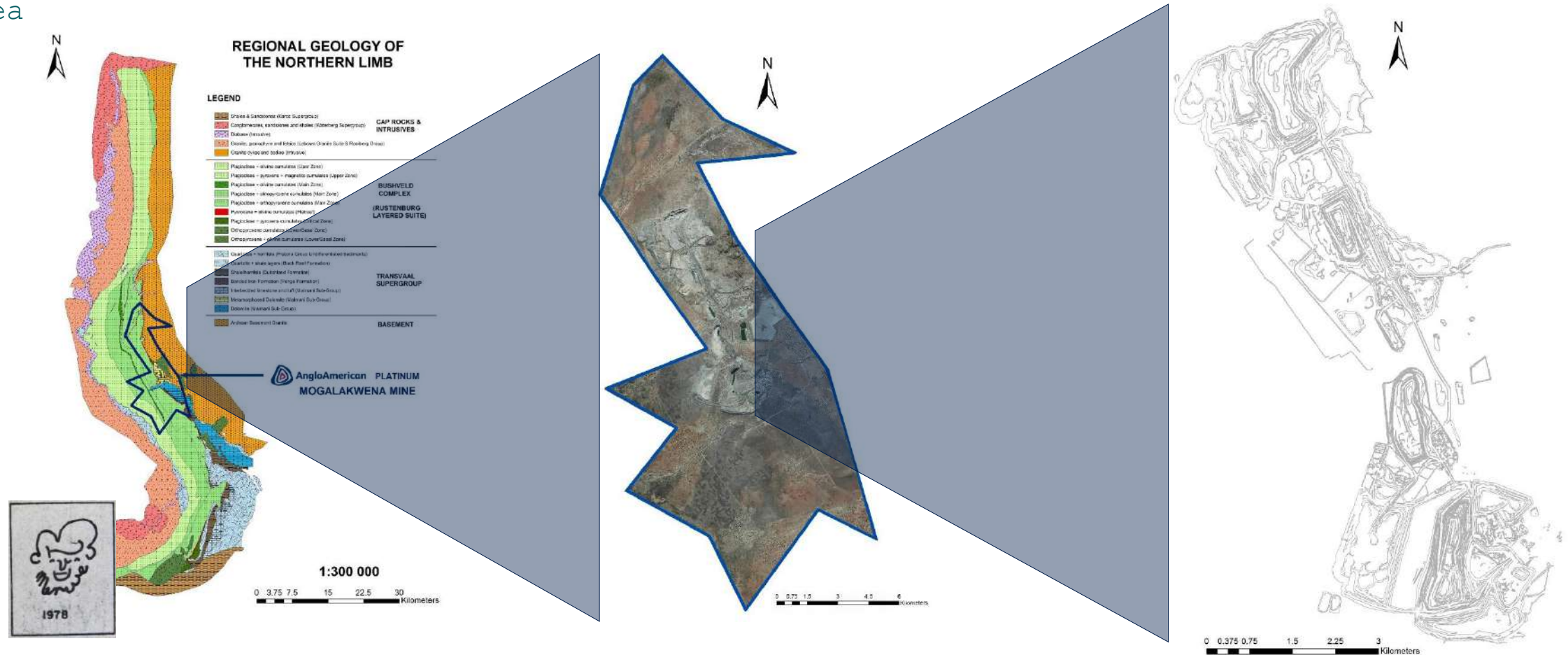
REGIONAL OVERVIEW

Location of Valterra Operations and JV's on the Bushveld Igneous Complex and Great Dyke



Anglo American Platinum- Ore Reserves and Mineral Resources Report 2017

Location of Mogalakwena on the Northern Limb and detail of the mining area



Van Der Merwe, 1978

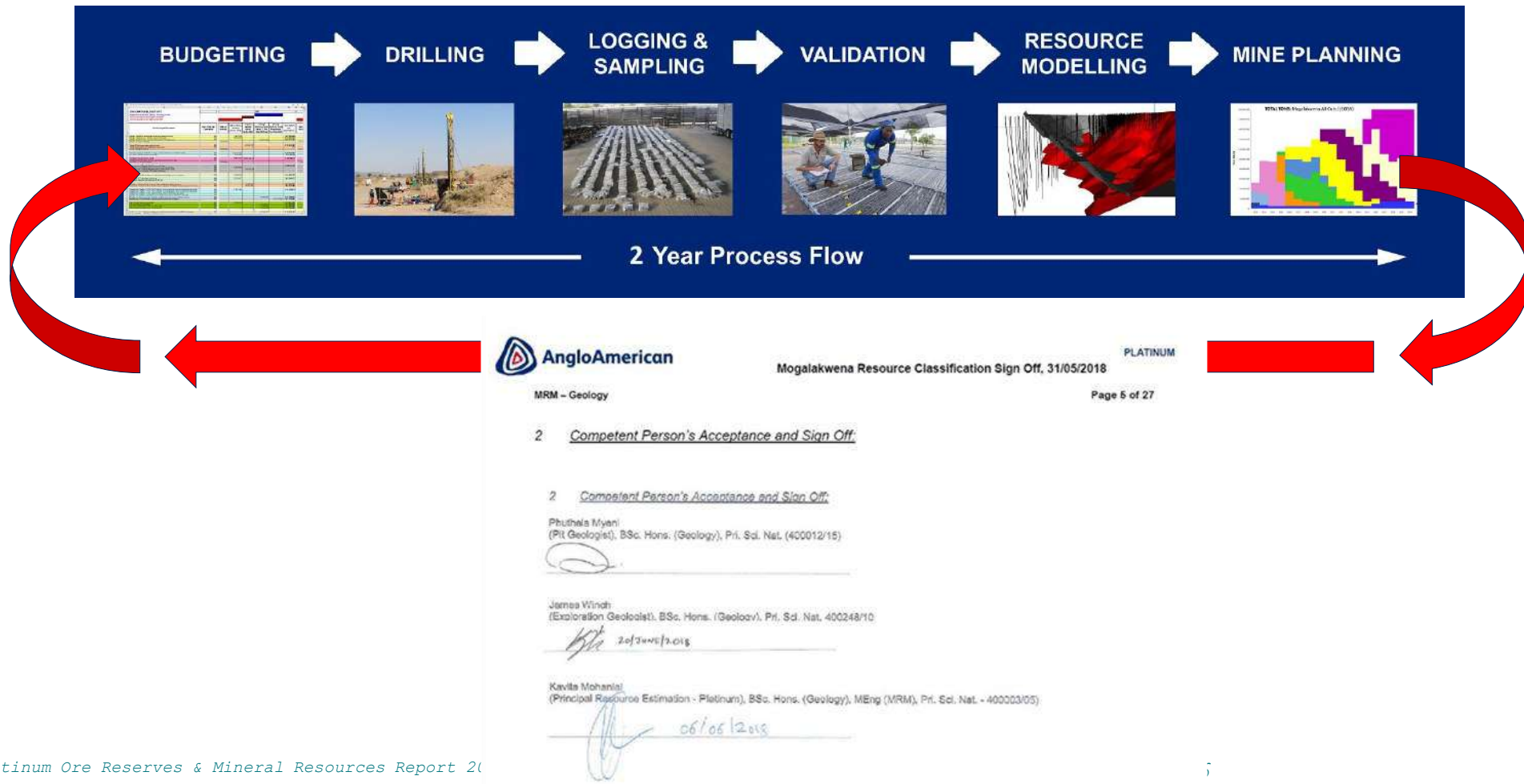
THE PLATREEF- WHAT IS IT?

A thick compound package of Critical Zone lithologies- dominantly pyroxenitic



RESOURCE DATA PROCESS FLOW

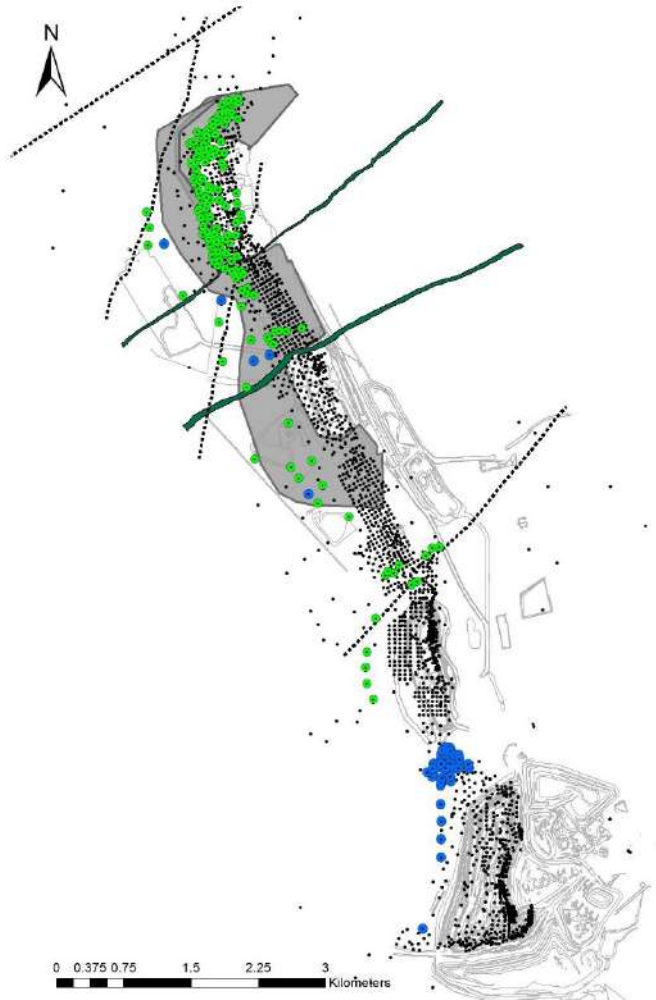
Comprehensive due diligence and delivery



Anglo American Platinum Ore Reserves & Mineral Resources Report 2018

RESOURCE DRILLING STATUS- 2008

Reserve Delineation for the 'PPRN' expansion, plus bridging the Sandloot 'Gap'

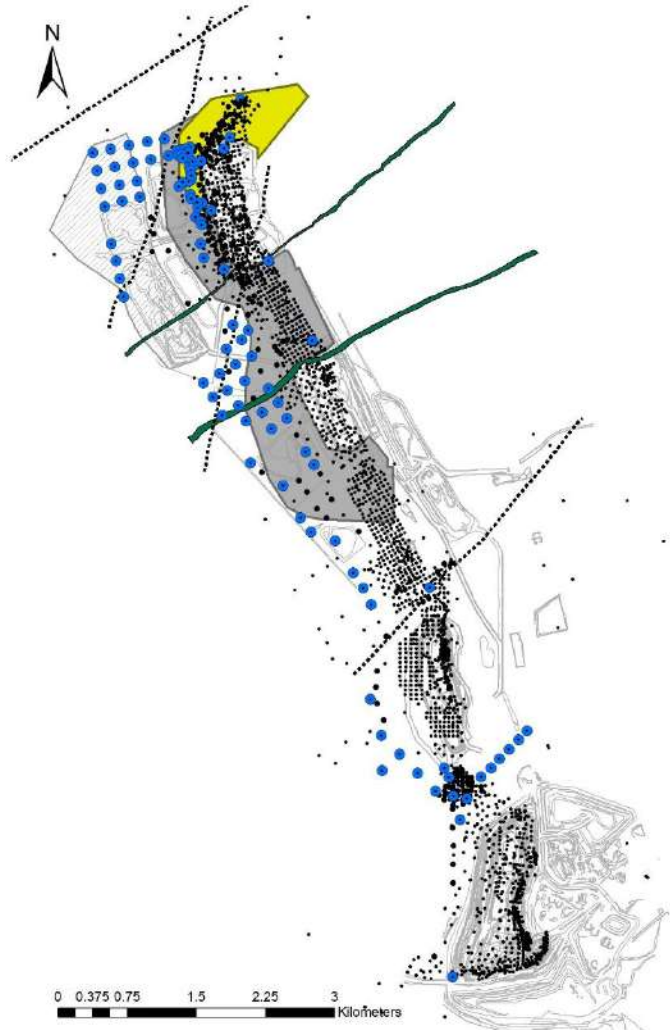


- High intensity coverage to support the development of North Pit
- Drilling in the Sandsloot Gap reveals the



RESOURCE DRILLING STATUS- 2009

Down-dip upgrade and development of the Lower Platreef occurrence

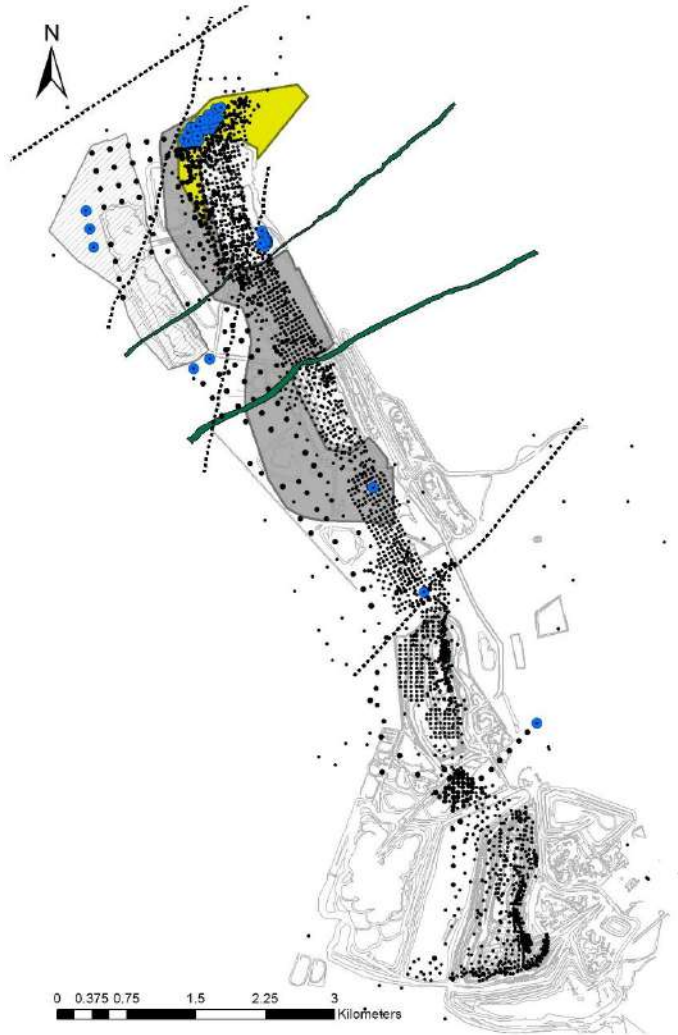


- Extensive down-dip drilling on the 200m grid to get ahead of dumping
- Dip section on the Lower Platreef
- First intersection/suspicion of the NMF



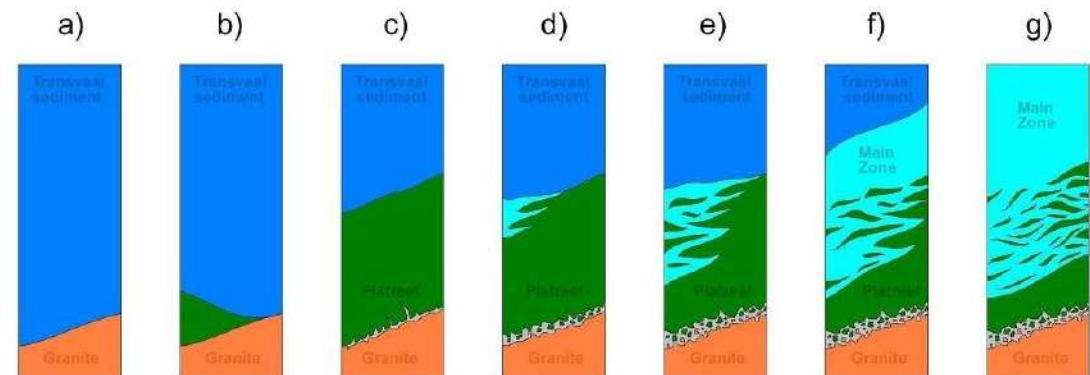
RESOURCE DRILLING STATUS- 2010

Short-term mine plan support drilling: upgrade for North Pit Cut 6



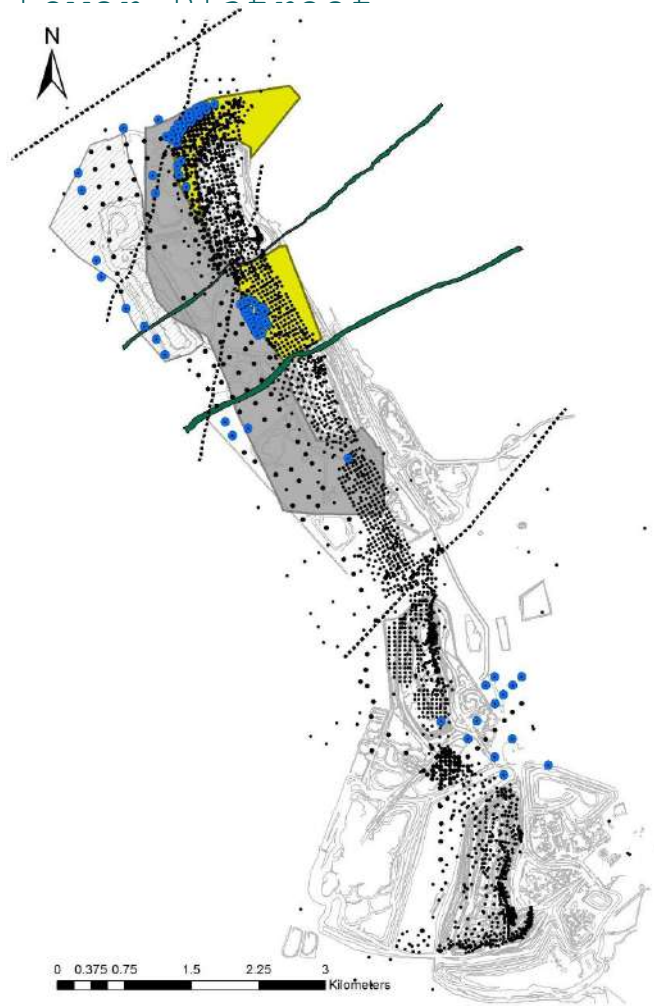
- 'Disrupted' Platreef makes its appearance
- Hunting massive sulphide veins in the pit

Proposed stages in the development of the disturbed reef facies



RESOURCE DRILLING STATUS- 2011

All categories of drilling: short-term mine plan support, Inferred conversion, & Transition Platreef

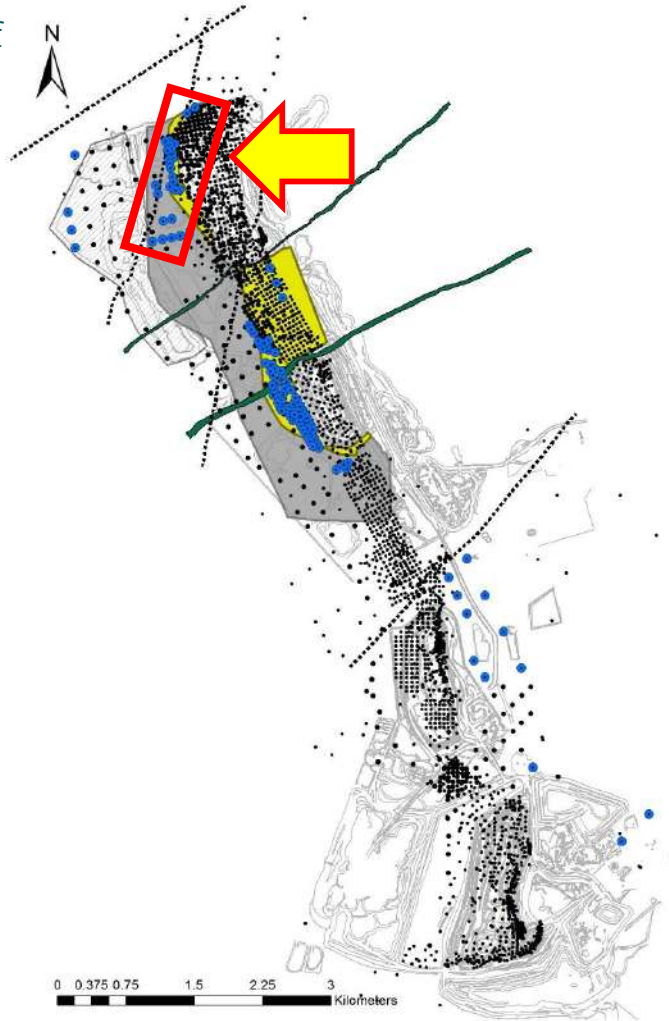


- Continued 'Deeps' sterilization drilling
- NMF starts to shape-up definitively
- More localized dip sections of the Lower Platreef



RESOURCE DRILLING STATUS- 2012

Large-scale short-term mine plan support drilling around Central Pit,
structural def



- High-confidence delineation of the NMF

RESOURCE DRILLING STATUS- 2013

Short-term mine plan support drilling focuses on South Pit (old Cut 9), continues a



MINERAL RESOURCES

The Mineral Resource model used to report the 2012 Platreef Resources for Mogalakwena North was updated in 2013. Through extensive exploration drilling as well as geophysical studies the apparent flattening of the orebody was proved to be the result of a steeply dipping strike fault displacing the orebody upwards to within an opencastable depth. This, together with the large-scale upgrade of Inferred Resources to an Indicated classification through exploration drilling, has resulted in an increase of 627 million tonnes (52.5 4E Moz) in the reserves for Mogalakwena.

Quartus Snyman (MBL, BSc (Geology) Hons)

PrSci Nat (400027/04)

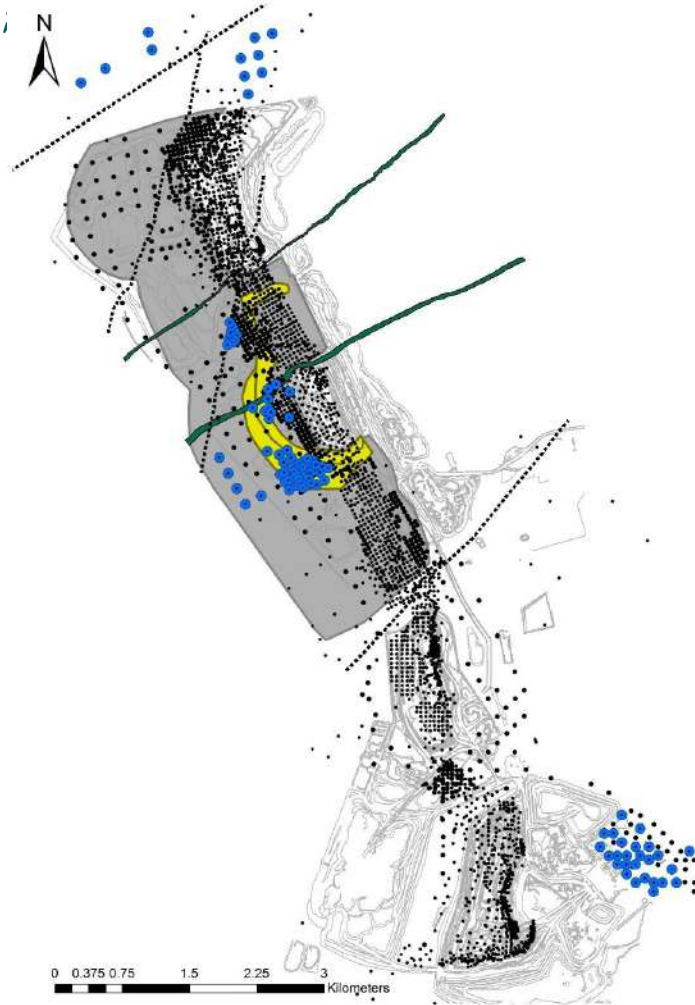
Head: Geosciences and Exploration
Anglo American Platinum Limited

Johannesburg
31 January 2014

RESOURCE DRILLING STATUS- 2014

Short-term mine plan support drilling: upgrade for Central Pit Cut

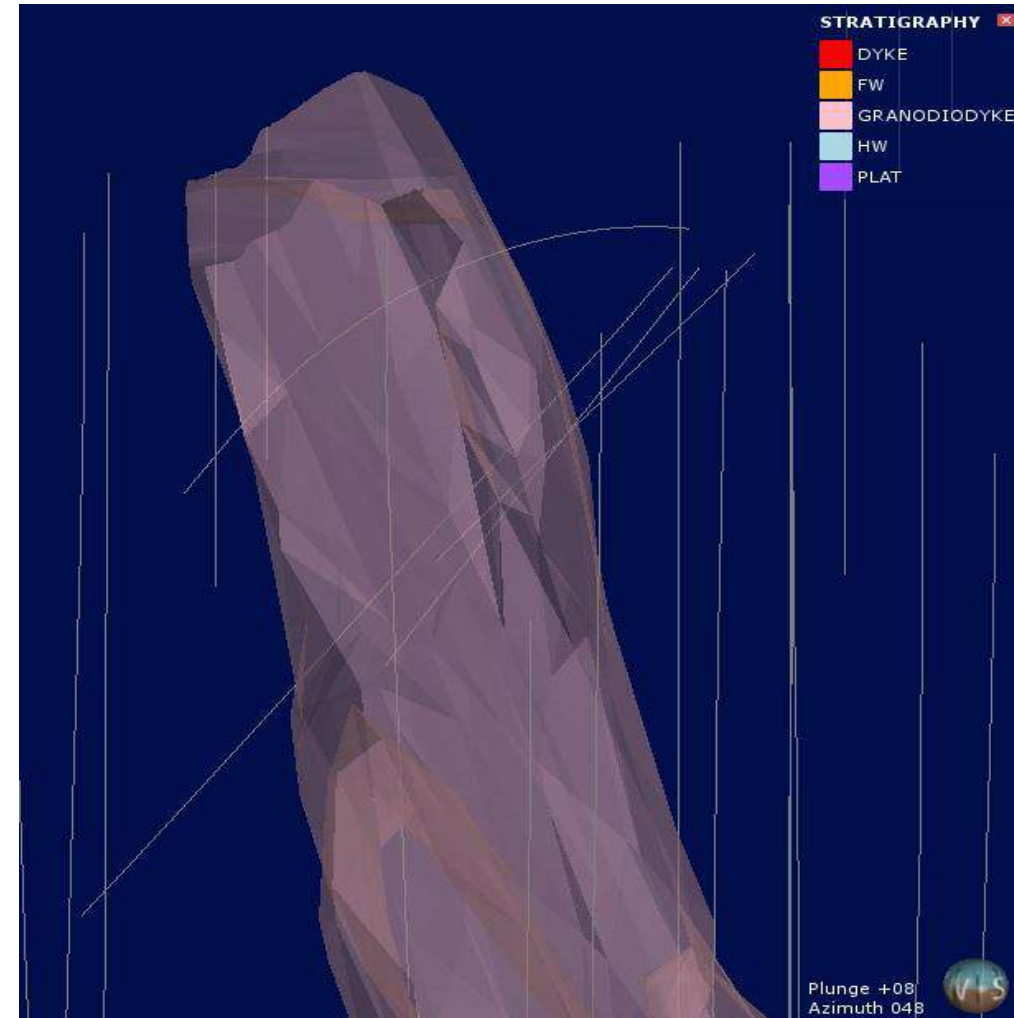
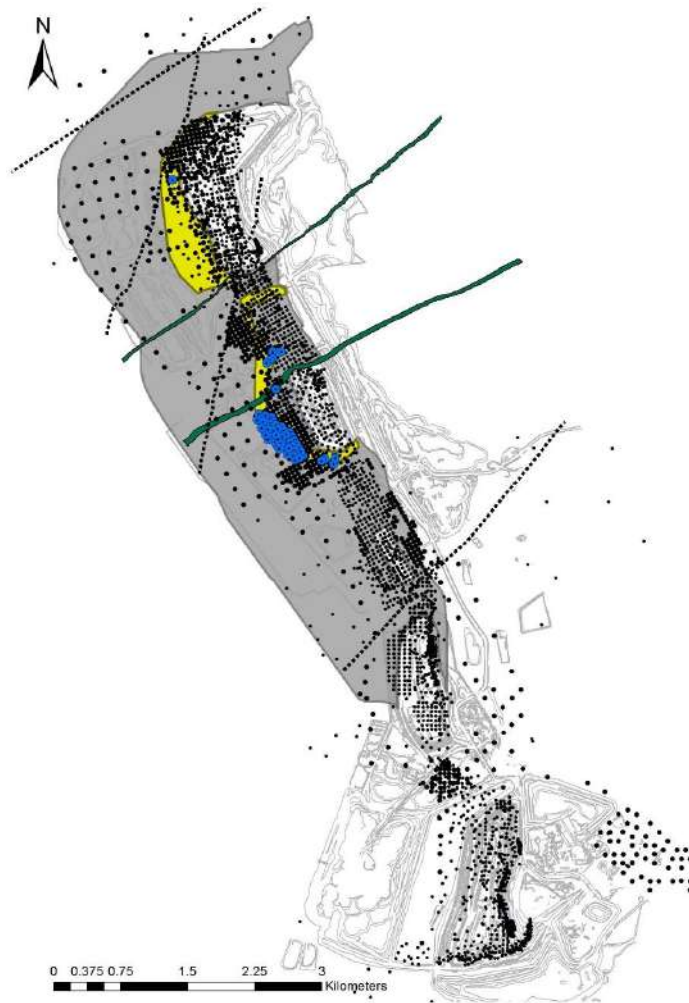
9.2; Pit Fault;



- Short-term mine plan support drilling for Central Pit
- Delineating the Pit Fault
- Continued resource drilling on Lower Platreef
- Some down-dip drilling

RESOURCE DRILLING STATUS- 2015

Short-term mine plan support drilling: upgrade for Central Pit Cut 8 and 9

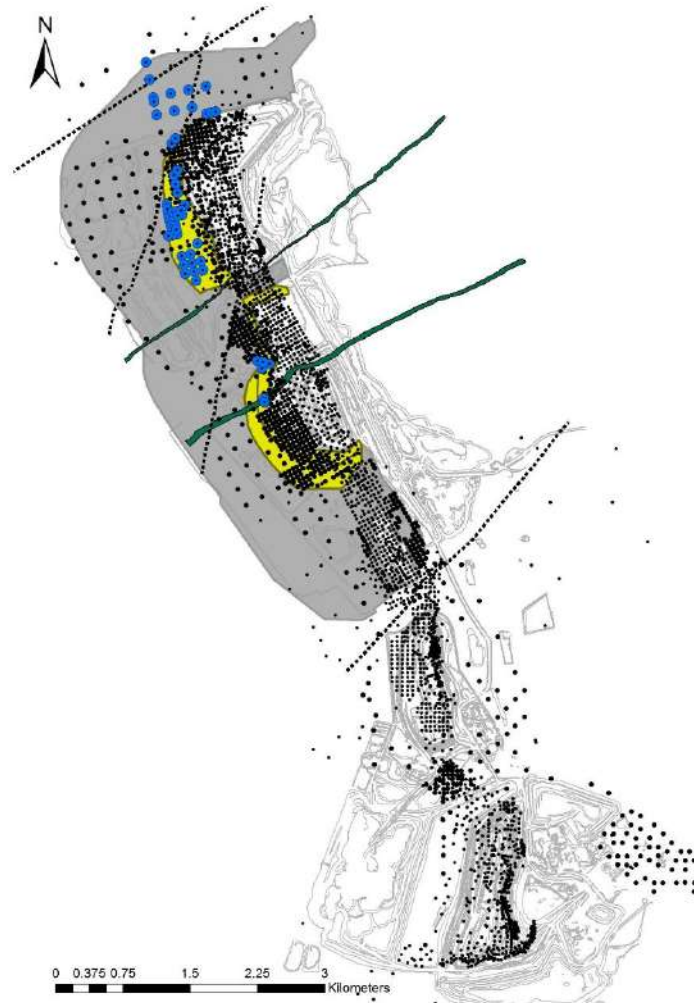


Zone feeder dyke (?) transecting the
Cut 8 area

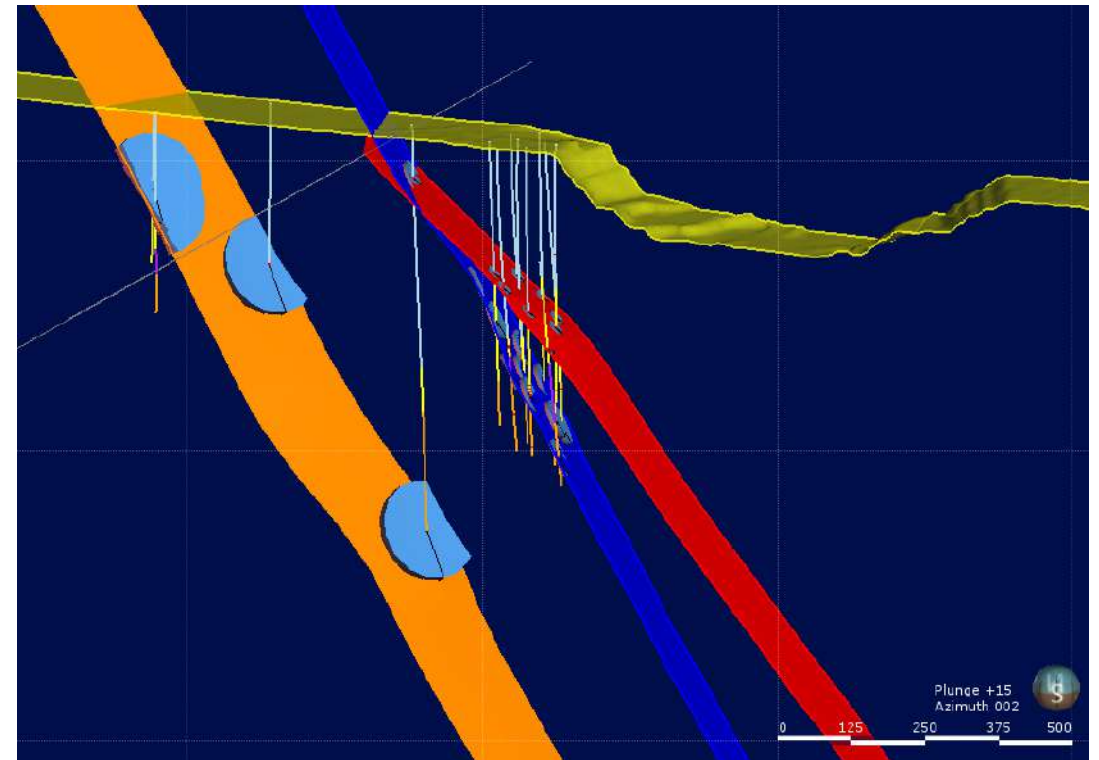
RESOURCE DRILLING STATUS- 2016

Short-term mine plan support drilling focuses on North Pit, + structural delineation

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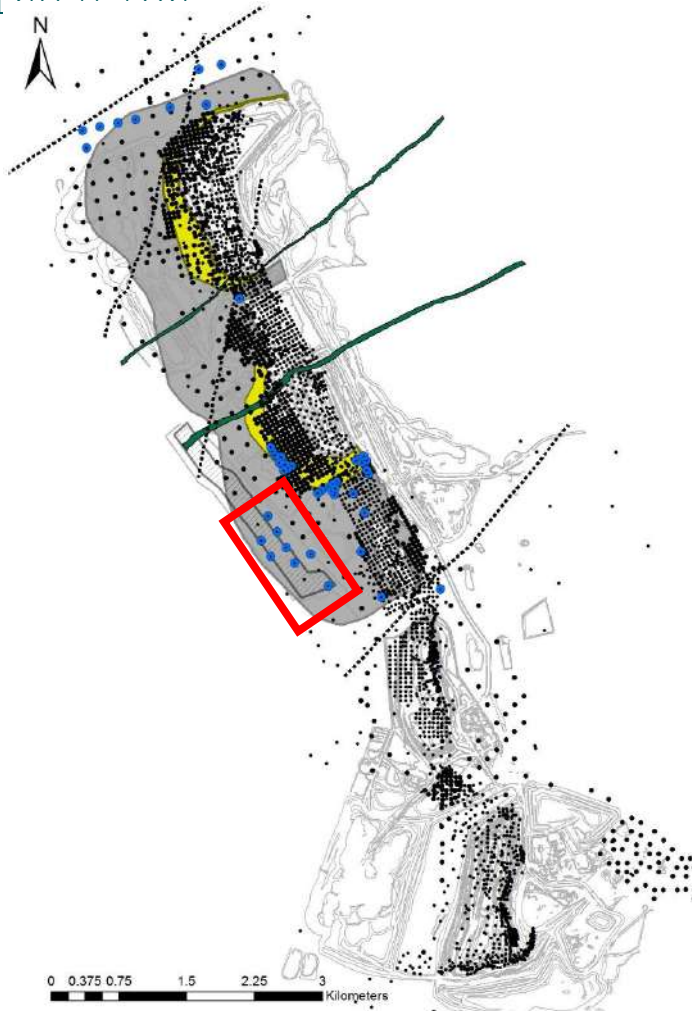


- North Pit Cut 10 upgrade
- Continued structural definition of NMF and DF, + delineation of ABF



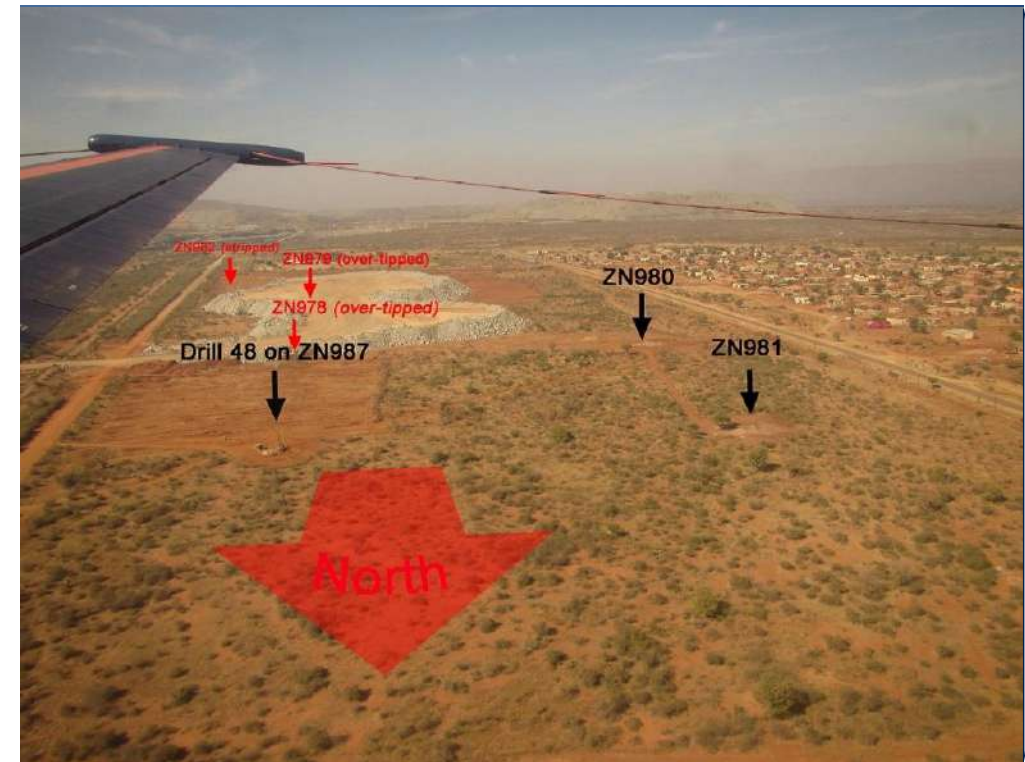
RESOURCE DRILLING STATUS- 2017

Short-term mine plan support drilling focuses on Central Pit, + structural delineation



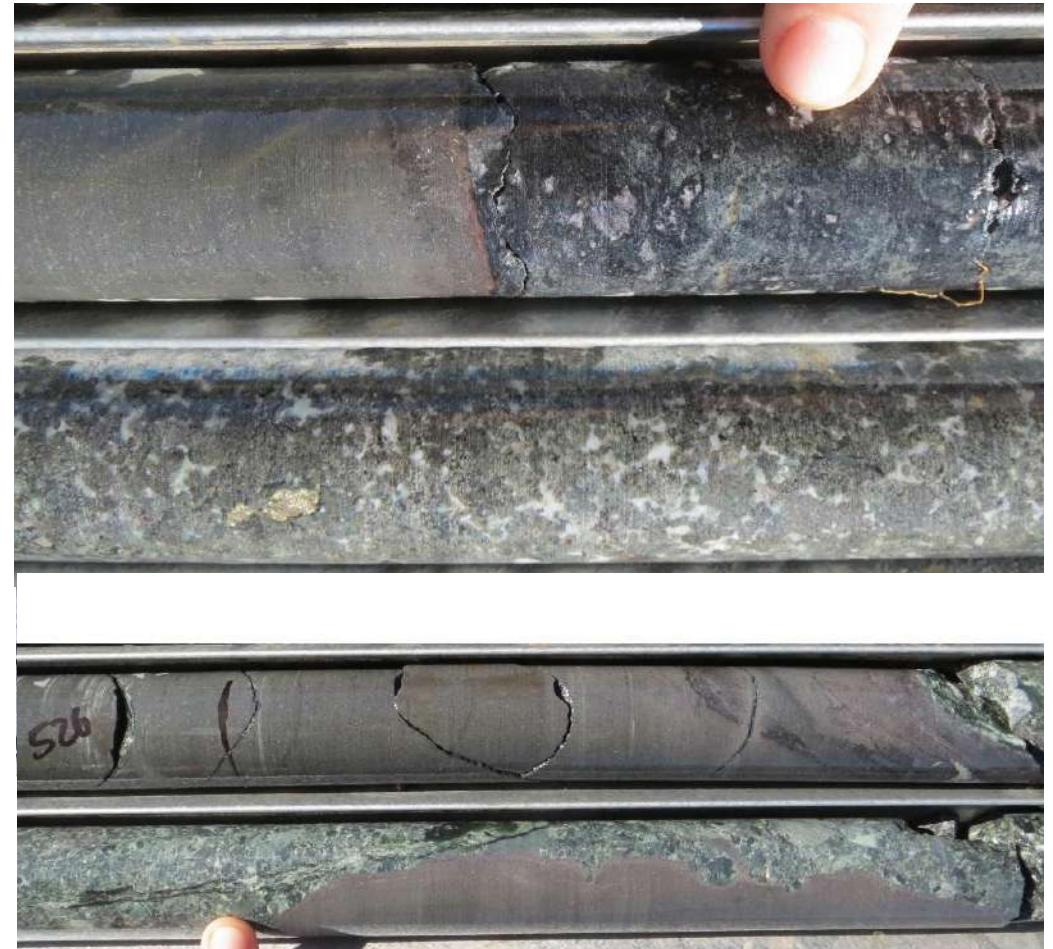
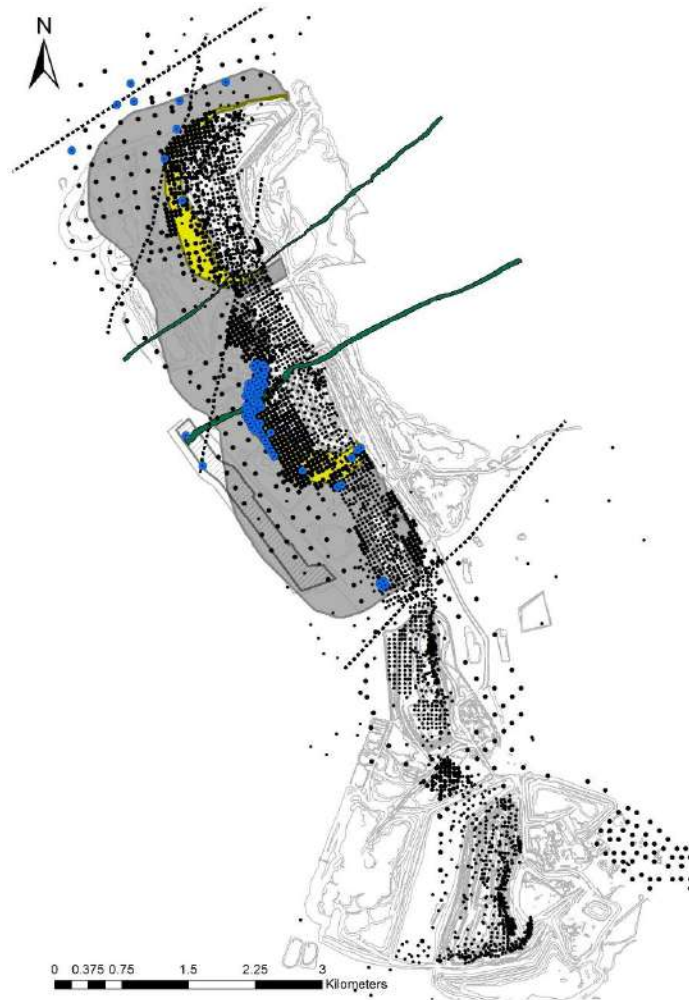
Drilled 8 boreholes and sent 2000 samples, which yielded:

- 811 ounces of 4E Indicated Resource per 1 metre of core drilled
- 1.7 tonnes of Indicated ore from every R1 directly spent on resource geology
- Central Pit Cut 9 upgrade
- Continued definition of NMF, DF and ABF



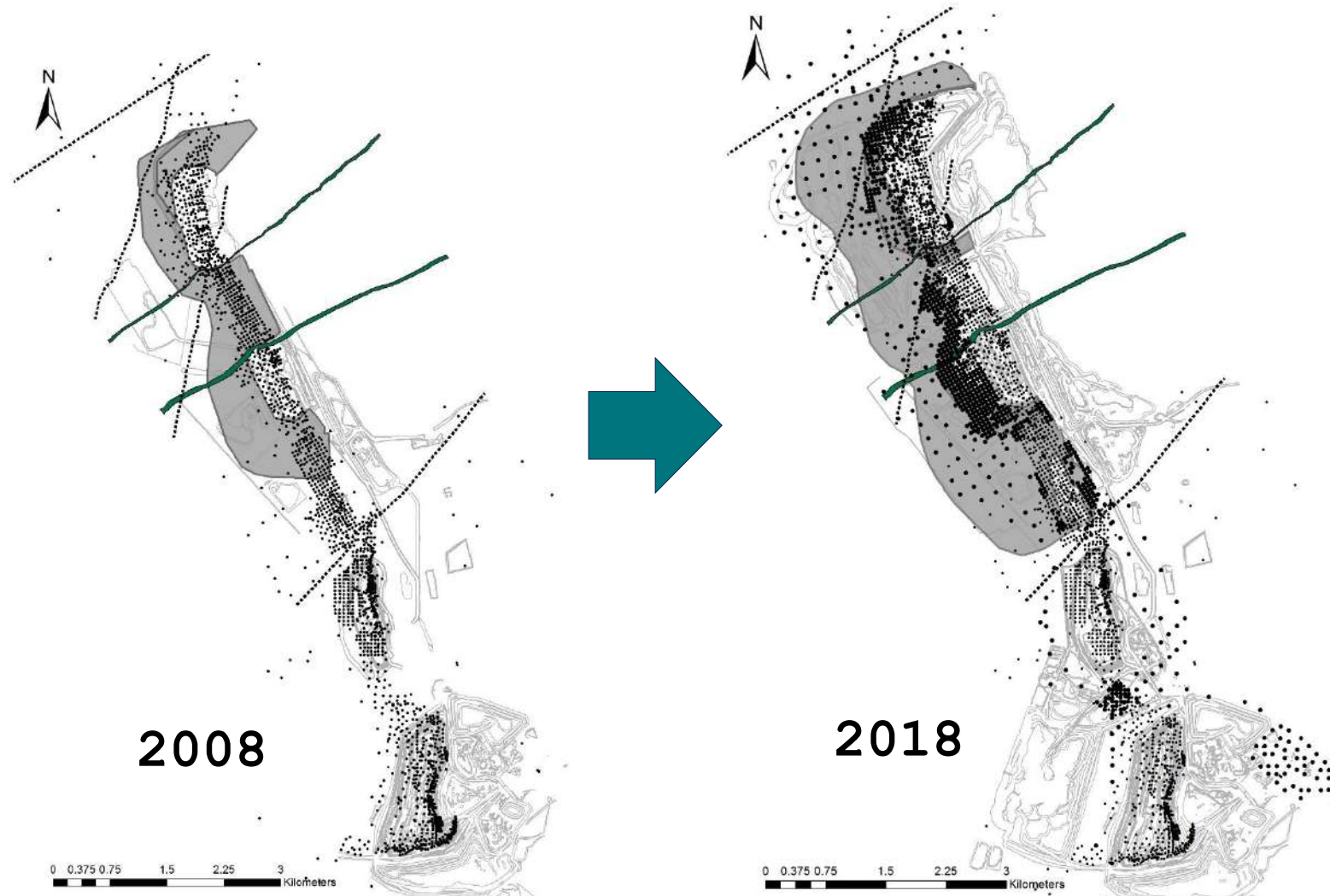
RESOURCE DRILLING STATUS- 2018

Short-term mine plan support drilling focuses on Central Pit Cut 9



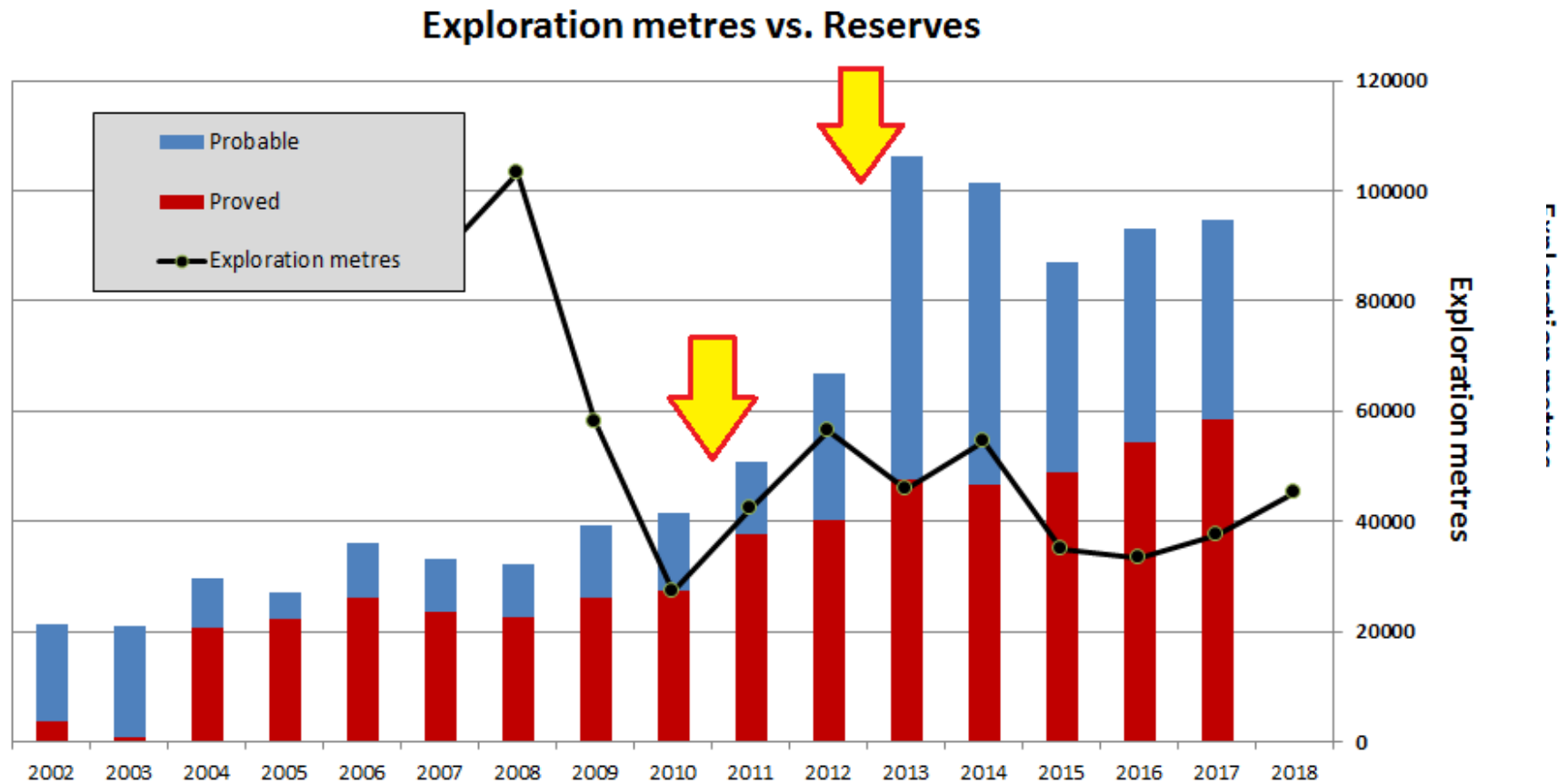
COMPARISON: 2008– 2018

Evolution of the Open Pit over the 10 year period



THE NUMBERS

The impact of Resource Drilling on Resource and Reserve development



Anglo American Platinum Annual Reports + Ore Reserves and Mineral Resources Reports 2009- 2017

WHAT DOES THAT LOOK LIKE?

Some spatial time-lapse context of those drilling and mining volumes



SAFETY AND TECHNOLOGY

A journey of sustainable delivery and innovation

ORE RESERVES AND
MINERAL RESOURCES
REPORT 2017

BUILDING ON FIRM FOUNDATIONS
DELIVERING A SUSTAINABLE FUTURE



Real Mining. Real People. Real Difference.

Anglo American Ore Reserves & Mineral Resources Report 2017

Thank you

Unclassified



ACKNOWLEDGEMENT

To the teams doing the hard yards on the ground



REFERENCES

Record of Literature

- van der Merwe, M.J. (1978). The geology of the basic and ultramafic rocks of the Potgietersrus limb of the Bushveld Complex. Unpublished PhD thesis, University of the Witwatersrand, Johannesburg, South Africa.
- *Anglo American Platinum Annual Reports + Ore Reserves and Mineral Resources Reports:*
 - 2009
 - 2010
 - 2011
 - 2012
 - 2013
 - 2014
 - 2015
 - 2016
 - 2017
- *Anglo American Ore Reserves & Mineral Resources Report- 2017*