

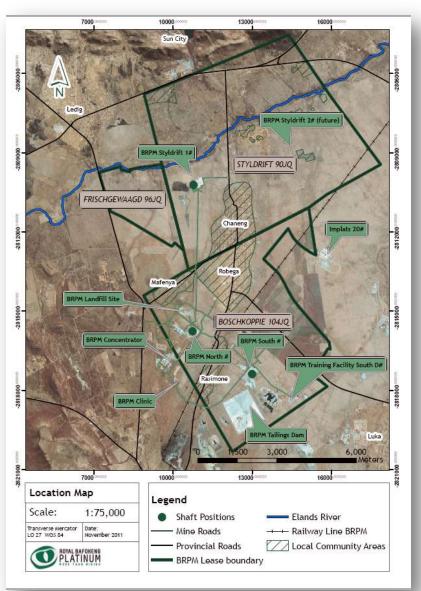
Styldrift 1 Site Visit

2 December 2011



# Styldrift 1 Project Geographic Location

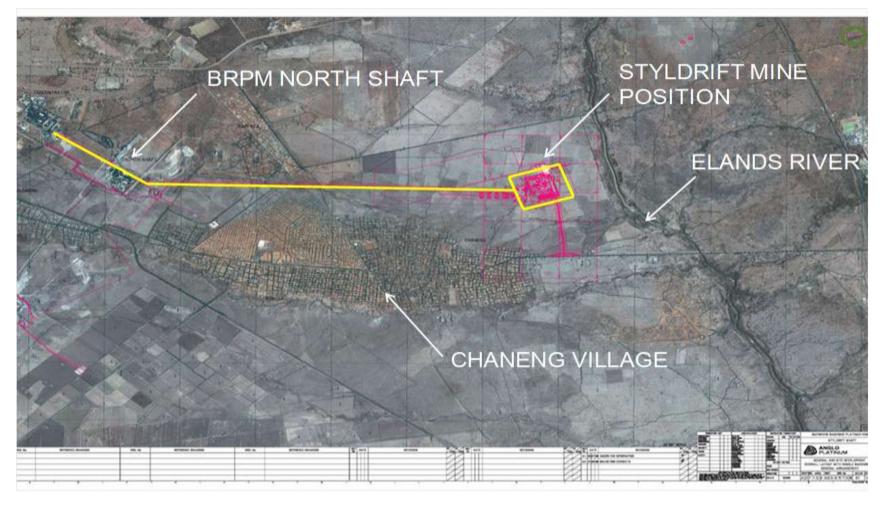








## Styldrift 1 Project Location







# Styldrift 1 Project Overview

#### Description

- Expansion project
- 230 ktpm Merensky mine and concentrator
- Dual shaft access: main shaft, services shaft
- Bord and pillar mechanised mining method

#### Styldrift Twin Shaft Complex



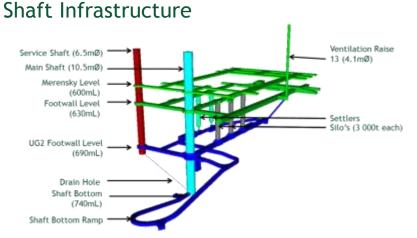
#### Shaft Infrastructure Features

- Twin Vertical Shaft Access
  - > Main shaft (10.5m dia. lined)
  - > Services shaft (6.5m dia. lined)
  - > Main shaft 740m below collar
  - > Services shaft 705m below collar
- Winders
  - Double drum Personnel and material winder -Main shaft (Kibble winder during Sink)
  - > Double drum rock winder Main shaft
  - Double drum service winder Services Shaft (Kibble winder during sink)
  - Accommodation for future 2<sup>nd</sup> rock winder
    Main Shaft
- Headgear Heights
  - > Main Shaft 58.6m
  - > Services Shaft 41.3m

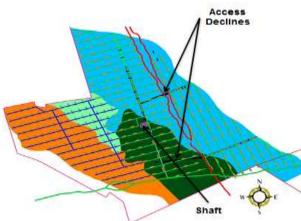




# Styldrift 1 Shaft Configuration



#### Mining Access



#### Shaft Infrastructure

- Production
  - > 230ktpm reef
  - > 45ktpm waste
- Injury free mine design
- Merensky reef mining focus
- UG2 mining being investigated
- Room & Pillar (Trackless) thick and central upper reef
- Conventional breast central mid and edge reef

#### Access Methodology

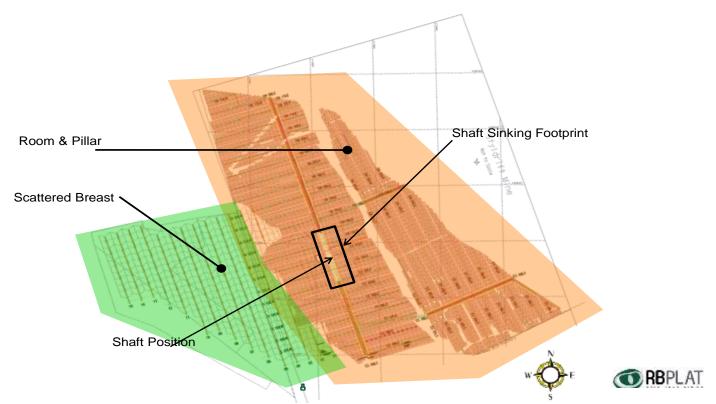
- Horizontal Access
  - > Main artery N-S
  - Access declines
  - > Strike FW Drives





# Styldrift 1 Mine Design

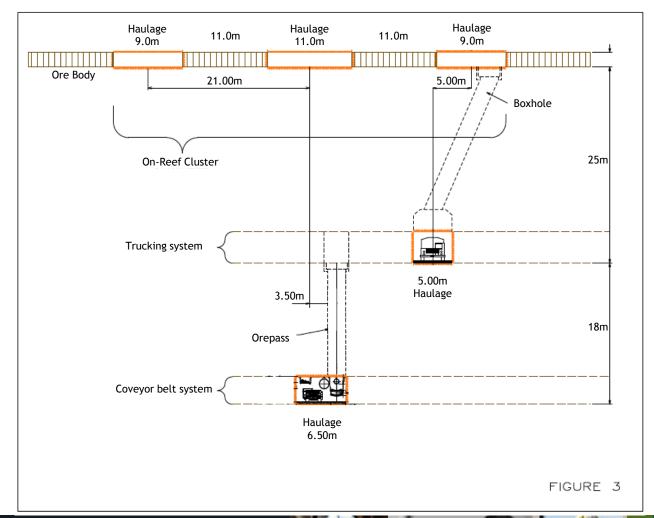








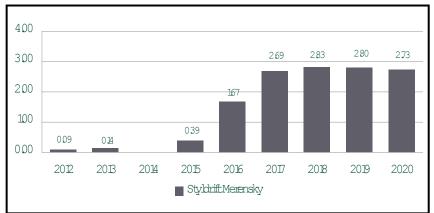
# Styldrift 1 Access Methodology - Main Artery





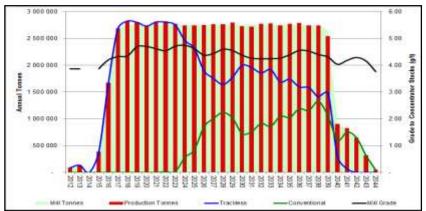


# Styldrift 1



#### Styldrift Mining Production (mtpa)

#### Styldrift Production Profile



#### Styldrift Resources and Reserves

	Merensky			UG2			Total	
	Mt	4E g/t	4E Moz	Mt	4E g/t	4E Moz	Mt	4E Moz
Measured	25.4	6.73	5.5	13.3	5.26	2.2	38.7	7.7
Indicated	16.2	6.68	3.5	25.8	4.97	4.1	42.0	7.6
Inferred	3.0	7.99	0.8	0.8	4.21	0.1	3.8	0.9
Total Resources	44.60	6.80	9.75	39.88	5.05	6.48	84.5	16.2
Proven	16.8	4.26	2.3	-	-	-	16.8	2.3
Probable	17.7	4.07	2.3	-	-	-	17.7	2.3
Total Reserves	34.5	4.16	4.6	-	-	-	34.5	4.6

Note: Data represents RBPlat 67% Attributable interest





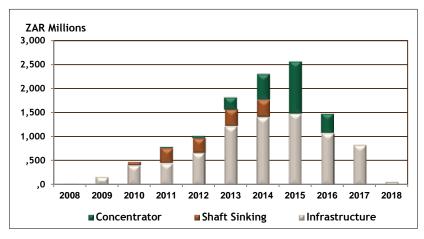
# Styldrift 1 Project Cost and Progress

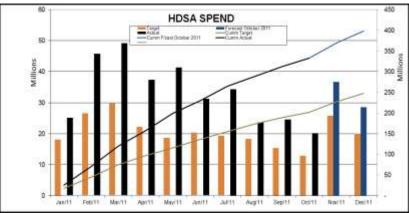
#### Capital Budget - Nominal

ZAR MM	Mining	Concentrator	Total
Authorised and Contingency	6,289	1,422	7,711
Escalation	3,153	938	4,091
Total Nominal	9,442	2,360	11,802
Latest Cost Forecast	9,209	2,360	11,569
Total Cost to Date	1,148	4	

- Cost commitment to date: R 1,867m
- HDSA spend to date : R 671m

#### Capital Cash Flow - Nominal

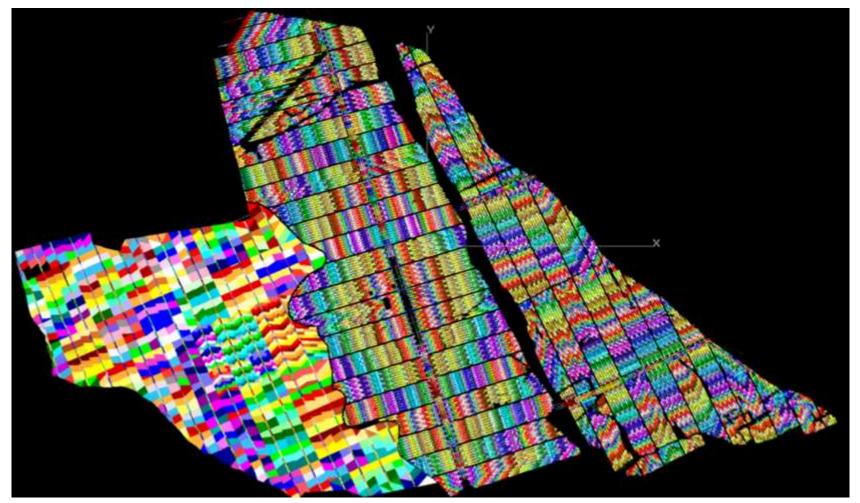








# Styldrift 1 Mining Footprint







# Styldrift 1 Legal and Permitting

- Mining Right
- EMP
- Water User Licence
- Legal Appointments
- Social and Labour Plan

Granted Approved Approved All in place Approved

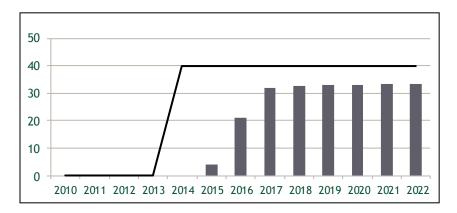
March 2008 March 2008 April 2010

September 2009





# Styldrift 1 Utilities



#### Styldrift Mining Electrical Load Build-up

#### **Power Supply**

- Temporary power : 10 MVA secured from Eskom via Boschkoppie substation
- Permanent power:
  - Eskom budget approved and upfront payment made
  - > Permanent power available by Q1 2014
- Emergency power: 3 x 3MVA backup generators

#### Water Supply

- Water use licence application has been granted
- Overland potable water pipeline installed





## Styldrift 1 Project Timetable



#### Progress (October 2011)

Planned % Complete: 24.55% Actual % Complete: 24.96%



Major equipment installation



Sinking activities commencement







#### Styldrift 1 Concentrator

Process Plant Design

- Pre-Feasibility study in progress completion planned for Q1 2012
- Concentrator design is for a 230 ktpm plant
- Site Location of Concentrator and Tailings facility to be finalized
- Feasibility study to commence in March 2012 and completed by June 2013

**Process Plant Execution** 

- Plant construction January 2014 December 2015
- Plant ramp up January 2016 March 2016





# Styldrift 1 Project Highlights

Completed Activities / Key Dates

- Project commencement date March 2009
- Bulk earthworks complete June 2010
- Bulk Civils completed October 2010
- Shaft pre sink commenced October 2010
- Personnel & Material winder commissioned March 2011
- Pre sink completed in April 2011
- Main sink commenced in July 2011

**Current Sinking Progress** 

- Main Shaft 193m
- Services Shaft 129m
- Project on schedule and under budget

**Production Key Dates** 

- Underground mine first production in Q2 2015
- Steady state by Q2 2017





# Styldrift 1 Optimisation

Optimisation study initiated in January 2011

Key components being reviewed are:

- Shaft bottom infrastructure layout
- Room and pillar mine design
- Strike ore handling methodology truck vs conveyors
- Pneumatic vs electric drilling
- Access to the UG2 ore horizon and associated infrastructure requirements
- Co-processing concentrator





# Styldrift 1 Major Activities Completed - Headgear Erection







# Styldrift 1 Major Activities Completed



Main Shaft Personnel and Material Winder (5.5m D):

Commissioned

Main & Service Shafts Stage Winders:

Commissioned







# Styldrift 1 Activities In Progress



Main Shaft - Sinking Progress





# Further organic growth in Styldrift II

#### Styldrift II project area

- Resource area ± 23 million m2
- Depth 900m 1,400m, average dip 90
- Average Merensky/UG2 middling 35m

# Potential size of investment similar to Styldrift I (+ R10 billion)

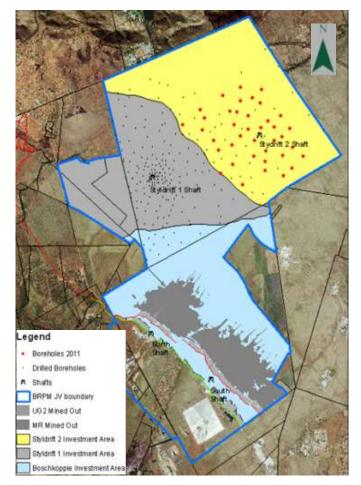
Opportunity will be evaluated through:

- Study consisting of a concept, pre-feasibility and feasibility study
- Exploration drilling programme which will develop the resource classification to support various study levels

Concept study initiated

Drilling programme

- 51,000m of drilling completed in 2011
- Reef intersections to date are well defined and relatively undisturbed











END