16 Shaft

5 December 2013
Impala Lease Area

Geological Anomalies

Welbekend 117 J.Q.
(Prospecting Permit)

N

Kilometers

0 15

We respect, care and deliver
No 16 Shaft History

- 1993 – The initial study started
- 2000 – The project (conceptual phase)
  Order of Magnitude Estimate (OME)
- 2004 – Complete the detailed feasibility with Control Budget Estimate (CBE)
- 2013 – 21 June Beneficial Hand Over – Cold Commissioning
24 September 2004: 16 Shaft site
Box Cut
October 2004 – 17 March 2005

We respect, care and deliver
Shaft Progress

We respect, care and deliver
Station Cutting
Compressors: 23 August 2007
Beneficial Hand Over: 21 June 2013

We respect, care and deliver
Shaft Structure and Layout
Head frame & Shaft Cross-Section

Technical specifications

<table>
<thead>
<tr>
<th></th>
<th>Rock Winder</th>
<th>Man Winder</th>
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</thead>
<tbody>
<tr>
<td>Pay load</td>
<td>25 000 kg</td>
<td>22 500 kg</td>
</tr>
<tr>
<td>Conveyance mass</td>
<td>26 500 kg</td>
<td>31 000 kg</td>
</tr>
<tr>
<td>Length of wind</td>
<td>1640 m</td>
<td>1601 m</td>
</tr>
<tr>
<td>Rope speed</td>
<td>16 m/s</td>
<td>16 m/s</td>
</tr>
<tr>
<td>Drum diameter</td>
<td>6.5 m</td>
<td>6.5 m</td>
</tr>
<tr>
<td>Number of head ropes</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Monthly production</td>
<td>262 829 t/m</td>
<td></td>
</tr>
<tr>
<td>Shift capability</td>
<td>2488 persons/hr – 300 /trip</td>
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</tbody>
</table>
No 16 Shaft UG2
Impala production profile

50-Year tonnage profile

We respect, care and deliver
Project Challenges
1) Rock Engineering – Shotcrete

19 October 2007:

A shotcrete specification was issued to keep the shotcrete within 15m from the advancing face. This should take place concurrent.

26 June 2008:

A second shotcrete specification was issued to apply on the face shotcrete for all the development ends.

- Impact on both quantity and cycle time.
2) Hex River Fault
3) Accelerated Corrosion
Current Status
Safety Statistics

Achievements:

- 1 Million Fatality free shifts on 1 August 2011
- 2 Million Fatality free shifts on 13 Mach 2013

<table>
<thead>
<tr>
<th></th>
<th>Quarter 4 - 2013</th>
<th>Quarter 1 - 2014</th>
<th>YTD</th>
<th>PTD</th>
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<tbody>
<tr>
<td>LTIFR</td>
<td>0.52</td>
<td>2.37</td>
<td>2.31</td>
<td>4.51</td>
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<tr>
<td>Reportable Rate</td>
<td>0.52</td>
<td>0.59</td>
<td>0.46</td>
<td>2.65</td>
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Key Dates

- **21 June 2013**: Beneficial hand over: RSV to Impala
- **02 July 2013**: Temporary licence: Man winder
- **10 July 2013**: Shaft Sinkers handover 21 to 24 level to Impala
- **17 July 2013**: The first development meter blasted by Impala
- **24 July 2013**: The first stope ca blasted by impala
- **5 Aug 2013**: Temporary licence: Rock winder
- **30 Sept 2013**: Full licence: Man winder
First Crew go down at 16 Shaft
Build-up: Development meters
Impala 21 – 24 Level: Shaft Sinkers 25 – 27 level
Forecast 5 Year Build-up

Total Eq m²

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
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<tbody>
<tr>
<td>FY2014</td>
<td>200000</td>
</tr>
<tr>
<td>FY2015</td>
<td>200000</td>
</tr>
<tr>
<td>FY2016</td>
<td>200000</td>
</tr>
<tr>
<td>FY2017</td>
<td>400000</td>
</tr>
<tr>
<td>FY2018</td>
<td>600000</td>
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</table>
Initiatives

- All rail bound development: Drill by Drill Rig
- All off reef ends: Shotcrete on the face
- All working places: 100% bolts and nets
- All underground employees: Rescue packs
- Surface control room: 65%
- Wi-Fi communication to be installed
  - Lamp tracking
  - Rolling stock tracking
  - Large equipment tracking
  - Telephone communication
Initiatives

- **CCTV**
  - Stations 50%
  - Loading areas
  - Conveyor belts
  - Any high risk areas

- **Guard cars** (20 Underground)

- **Hagg Loader at the multi blast ends**
Questions?

Thank You

16 Shaft Team