

# Navachab Gold Mine Expansion: Unlocking Jobs, Innovation and Economic Transformation.

George Botshiwe  
Managing Director  
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# Introduction

Location	Located 10km from the town of Karibib, and 180km west of the capital, Windhoek.
History	Production <b>commenced in 1989</b> , Mine owned by QKR NMH after an acquisition from AngloGold Ashanti in 2014.  Owner mining since 2004 supported by contract drilling and blasting. Pit Operations has a fleet capacity of 30 haul trucks and 6 excavators various support equipment, 9 drill rigs. In total, Navachab has 78 operating equipment
Commodity	Gold, Silver as byproduct
Mine Type	Conventional open pit with drilling, blasting, load and haul operations.
Processing	Conventional carbon-in-pulp (" <b>CIP</b> ") plant, fed through a semi-autogenous grinding (" <b>SAG</b> ") mill and an Argo mill with a combined processing capacity of <b>3.0 mtpa</b>  Pre-concentration Plant (" <b>PCP</b> ") with a capacity of <b>2.5 mtpa</b> which feeds the CIP with higher grade concentrate  <b>5.5 mtpa</b> processed
Resources	Reserve: 2.43moz (0.99 g/t) Resource: 5.16moz (1.14 g/t)
Employment	889 Direct Employees & 598 contractors (June 2025)



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# Ore Processing Capacity

- In 1989 Navachab started as a 90 tph CIP FAG Mill operation with a 9 year LOM
- By 2006 through various design changes to our plant Navachab was running a 150 tph SAG Mill operation with a 10 year Life of Mining and 55 Year Life of Treatment Plan. That was obviously a mismatch between what the orebody could deliver vs. processing capacity.
- We had to increase processing capacity but we were faced with 3 challenges:
  - 1 Limited Water Supply (3500 cu. m/day)
  - 2 Limited Power Supply (9 MW)
  - 3 Limited Funds
- Navachab adopted a 4 Step solution to increase capacity, later a 5<sup>th</sup> step was added



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# Ore Processing Capacity

## Step 1 Optimise the existing CIP SAG Mill Operation

A number of innovative changes were made to the CIP:

1. Change from cast to forged 100mm Steelballs to eliminate scats in the circulating load and thus increase mill feed
  2. Redesign Mill lifter Bar Liners to reduce relining time, reduce steel consumption and optimise tumbling action in the Mill
  3. Maximised the rate of critical size Pebble production by replacing the Mill trommel screen with a vibrating screen allowing for more screening open area (moved from +25 -60 mm Pebbles to +5 -60 mm Pebbles)
- To improve mill classification a 2 cyclones system was upgraded to a cluster of cyclones to allow for tighter controls
  - Added 4 Derrick Screen Stack Sizers to further improve classification efficiency
  - Used SCADA system to optimise mill mass control

These initiatives increased the Mill throughput from **150 to 220 tph**



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## Step 2 Maximise the use of available water

With no access to additional water above the 3500 cu. m/day, we had to look at ways of conserving water,

- Increased the residue discharge density from 1.35 t/cu. m to 1.55 t/cu.m
- Added three 80 sq.m belt filters to maximise water recovery from tailings (and maximise the Life of TSF)
- Redesigned pumping, cooling and piping systems inside the CIP plant to reuse water wherever possible

This enabled Navachab to reduce the water consumption from 1.3 cu. m/t to 0.4 cu. m/t.

**This enabled the expansion of the treatment capacity as water was now available**





### Step 3 Increase throughput by Pre-Concentration technology

- A 55 Year Life of Treatment at a grade of 0,7- 0.9g/t was unsustainable. We had to find technology that could treat the low grade earlier in the schedule.
- Added a 200 tph **Dense Medium Separation (DMS)** plant and a 200 tph **X Ray Transmissive (XRT) Sorting Plant** to treat low grade material.
- These 2 technologies jointly know as the PCP, makes use of the density characteristics of gold to produce a higher-grade concentrate. This higher grade concentrate was then fed to the SAG mill for further processing.
- Navachab was the pioneer and first in the world to make use of this technologies to recover gold and we have managed to make it work



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## Additional Milling Capacity

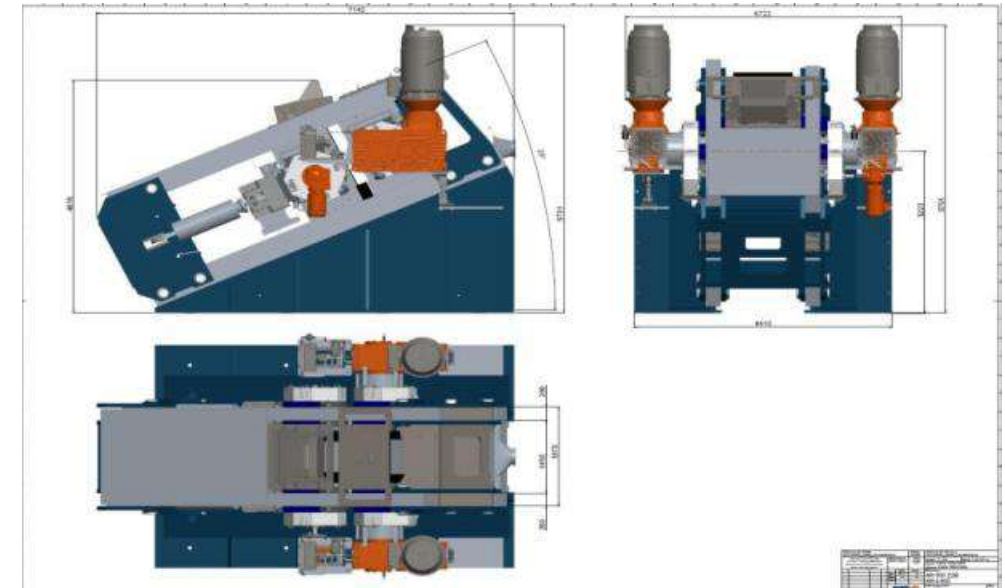
### Step 4 Maximise the throughput of the combined Plants

- We were now producing a concentrate from the PCP, but this concentrate was being fed to the SAG mill meaning it was taking milling capacity.
- We had to find a milling technology that met our constraints especially water and electricity supply.
- After a detailed research we added a 160 tph comminution plant consisting of an ARGO Mill and an STM Tower mill to increase milling capacity from the 1.8 mtpa to 3.0 mtpa.
- Upgraded the downstream processes by modifying the adsorption tanks and increasing leach capacity.
- Now in the process of installing a gravity concentrator to improve recovery

By the end of this Phase the mine was now running a combined processing capacity of 550 tph, quite a step up from the initial 90tph!

All this has the effect of increasing gold production and lowering our operating unit costs

Between 2015 – 2022, Navachab produced 60,000 oz on average. In 2024, we more than doubled that to over 125,000 ounces which was a record high and in 2025, we are on track to break that record by production 130-140 koz.



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## We are not done yet!

Further expansion of processing capacity – need to remove constraints

- Need additional water, negotiation with NamWater underway
- Need additional power, negotiate an increased power supply from NamPower, also evaluating solar
- We have identified technologies that can more than double current treatment capacity.



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- In 2020, Navachab expanded its mining fleet
- Recruitment of new employees. Compliment increased from just under **500** in 2020 to **890** employed directly by Navachab and a further **598** employed by contractors at the mine
- Underground exploration Project

## Underground exploration Project

- Ore body too deep for open pit mining
- Underground methods successfully trialled
- Exploration drilling is next
- Planned at a cost of NAD4.0 billion over the next 4 years



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# Empowering Namibian Entrepreneurs

Spend Origin	2024 Total NAD
Imports South Africa	223,234,536.89
International Imports	172,164,917.82
Local ( Karibib)	37,744,767.39
Namibia	1,845,216,777.06
SOE / Public entity	215,614,281.02
Total Namibia	<b>2,098,575,825.47</b> (84%)
Grand Total	<b>2,493,975,280.18</b>

NAME OF LOCAL CONTRACTOR	PAID (NAD) YTD
ADP PROJECTS NAMIBIA	11,248,219.62
ADVANCED FIRE SUPPRESSION NAMIBIA	2,376,203.56
BULK MINING EXPLOSIVE NAMIBIA	48,616,447.57
BUSINESS CONNEXION NAMIBIA	4,417,006.69
COASTAL TOOL HIRE CC	454,189.20
DIGITS INVESTMENTS CC	7,672,774.35
DRA MINERAL PROJECTS PTY LTD - NAMI	22,745,423.44
DUNELEC CONSTRUCTION CC	8,562,079.00
DUPLEX MAINTENANCE SERVICES CC	668,046.41
DUST-A-SIDE NAMIBIA (PTY) LTD	8,252,761.93
DYMOT ENGINEERING COMPANY (PTY) LTD	159,700.00
ECOPROJECTS	1,222,310.06

NAME OF LOCAL CONTRACTOR	PAID (NAD) YTD
ECOPROJECTS	1,222,310.06
<b>EITAVELO MINING CC</b>	<b>43,516,464.75</b>
ENVIRONMENTAL COMPLIANCE CONSULTANC	712,442.88
Epiroc Mining (ATLAS) (pty) Ltd	11,490,624.85
ERONGO DRUM CLEANING NAMIBIA	275,000.00
FAST AND FURIOUS COURIERS CC	437,521.52
G4S MANNED SECURITY NAMIBIA	2,486,813.82
GUNZEL DRILLING CC / PO Box 4261 / 9000 SWAKOPMUND, NAMIBIA	8,166,739.18
GUNZEL DRILLING cc / PO Box 4261 / 9000 SWAKOPMUND, NAMIBIASWAKOPMUND, NAMI	1,934,887.31
HAMMERSTEIN MINING & DRILLING CC	4,162,827.69
HERMANUS SHUTTLES	118,858.02

NAME OF LOCAL CONTRACTOR	PAID (NAD) YTD
HIMOINSA SOUTHERN AFRICA PTY LTD	7,709,145.53
HISKIA STEEL	106,360.80
HUMAN DRILLING CONTRACTORS / PO Box 1314 / 9000 OKAHANDJA, NAMIBIA	709,819.45
IGL (PTY) LTD (AFROX) - Equipment	4,537,378.19
IGL (PTY) LTD (AFROX) - Oxygen	7,527,789.60
J.W. THOMAS CONSTRUCTIONS CC	232,640.40
K. NEUMAYER CIVIL CONTRACTORS	15,308,863.74
<b>KODO DRILLING cc</b>	<b>54,912,650.42</b>
KOMATSU NAMIBIA MINING	98,757,066.26
KRAATZ MARINE (PTY) LTD	5,495,587.26
LANDSBERG DRILLING AND BLASTING CC	3,118,282.86
LITHON PROJECT CONSULTANTS / PO Box 40902 / 9000 WINDHOEK, NAMIBIA	24,871.49



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# CSI



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## 1. National Borehole Project

- Completed Drilling and Installations of 12 boreholes in Kavango –West, Zambezi , Kunene and Omaheke Region
- 11 boreholes successfully drilled and installed in 4 Regions
- Project Cost: N\$ 5.1m

## Beneficiaries

- 700 household
- 400 household headed by women
- 3,560 beneficiaries
- 15,000 livestock

## Other Benefits

- Reduced crocodiles' attacks
- More time for family related activities
- More time for productive purposes; homework
- Reduced of household Hazards: fire, domestic violence
- Water close for livestock drinking





## 1. EDUCATIONAL DEVELOPMENT

- Completed a block of classroom at Karibib Junior Secondary School. This was in partnership with VIVO Energy
- Project costed **1 million**

**Project Completed and handed over**

## 2. BOUNDARY WALL, FENCING AND NETBALL COURT AT KARIBIB PRIVATE SCHOOL

- We build a perimeter wall at Karibib Private School Hostel
- The Project costed **12.5 million**
- A fence and a netball court was constructed around the school
- The project costed **1 million**

**Project Completed and handed over**

## 3. SHED AT EBENHAISER PRIMARY SCHOOL

- An open hall that can seat 500 students
- Project costed: **N\$500,000**

**Project Completed and handed over**

## 4. TRAFFIC LIGHTS AT TWO INTERSECTIONS IN KARIBIB

- To regulate traffic and create safety in the town.
- Project cost: **2 million**

**Project Completed and handed over**



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## 5. OTJIMBIGWE MORTUARY

- The Otjimbigwe settlement is 60 km south of Karibib with about 6,000 inhabitants
- The nearest mortuary is Karibib, Usakos and or Swakopmund
- The Mortuary will elevate the clinic to include
- ( Maternity delivery room ( Sponsored y Lepidco)
- A mortuary with an incinerator and standby generator
- Project cost: **4 million**
- The project will benefit the community for many years to come

**Project Completed. Handover in early 2025**

## 6. UIS ELECTRIFICATION

- To provide economic activity in the Usab Informal Settlement
- For safety and development in UIS
- To reduce shack fires, minimise rape cases and criminal activity
- Project cost: **2.9 Million**

**Project Almost at Completion. Handover in early 2025**

## 7. WATER IN SPITZKOPPE

We connect five projects with water. Tanks and stands were acquired for reserve water for projects. Partnership with B2Gold

Project cost **N\$170,000**

**Project Completed. Handed Over**



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# Usakos SME Park Project

## USAKOS SME PARK

- Project estimate: 3.5 million for 2025/6
- 10 Units for SME occupation
- Plans are done
- UTC has been given land by Trans Namib and all legal papers are present



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## THE KARIBIB MEDICAL CENTRE

- The Karibib medical centre is earmarked to given the ever-growing population of Karibib and the surrounding farms.
- Discussions with MoHSS are underway
- Land already donated by Karibib Town Council
- Surveying and Geotech already completed
- Architects and QS – appointed
- Ground breaking – Done
- Work to commence in quarter 4 of 2025
- Project estimate: NAD **20 million for 2025/6**
- **Total NAD 80 million**



## 1. TRAFFIC VEHICLES

- To help NAMPOL fight crime and maintain law and order
- Project cost: **1.3 million**
- We further service police vehicles twice every year. This service includes tyres.
- Project costing:

**Project is operational and on going**

## 2. FIRE TRUCK SERVICES, X – RAY AND EMERGENCY SERVICES

- Navachab trucks and emergency services available for on road assistance of shack fires in the towns.
- We are buying a fire truck for the Usakos



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## 1. Golden Egg Project. **Project at 70 %**

- To provide mentorship and funding for sustainable projects
- Project cost: **2.5 million**

## 2. The Garden Project & Agri park **(Completed)**

- Two projects In agriculture were sponsored to the tune of N\$150,000 each. One is in Otjimbingwe and the other in Karibib. Mostly run by widows and women from disadvantaged backgrounds.
- Project cost: **N\$300,000**





## 3. Karakul Project

- Support selected local farmers
- The idea was to **supply farmers with a core breeding herd of sheep**, train the farmers to expand the herd and equip them with skills to sustain this effort.
- Navachab continue to support these farmers with relief fodder to enable the survival of the herds.

**Project Cost: N\$500,000**



## 4. Drought Relief Project

- Project initiated as part of Harambe initiative to support marginal communities
- 1,400 bags (50 kg) of Feed supplement
- 600 bags (50 kg) Licks

**Project Cost: N\$ 500,000**



## 5. Karibib Women Garden Project

- Identified need to employ 26 jobless female breadwinners from the Usab township.
- Project area of 4 hectares was donated
- Mine in Partnership, Regional Governor of the Erongo Region, the Town Council, the American Embassy

**Project Cost: N\$ 300,000**







- Purpose**
- Consultative
  - I & AP Compliance

2025		
Town	1 <sup>st</sup> quarter	4 <sup>th</sup> Quarter
Karibib	25 March	28 October
Otjimbingwe	26 March	29 October
Usakos	27 March	30 October



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# THANK YOU

