

LANGER HEINRICH MINE

Namibia, Southern Africa

February 2011

INTRODUCTION

The Langer Heinrich Mine (LHM) is located in the west of central Namibia, Southern Africa. It lies 80km east of the major deepwater port at Walvis Bay and the coastal town of Swakopmund.

LHM was the first conventional uranium mining and processing operation to be brought into production in over a decade. Paladin was able to deliver the project on schedule and within the original budget of US\$92M despite the significant cost pressures experienced by the mining industry during the twenty month construction term.

The mine has ramped up to Stage 2 capacity of 3.7Mlb U₃O₈/pa. A further (Stage 3) expansion to 5.2Mlb/pa was granted in early 2010 and this is scheduled for commissioning in March quarter 2011.

Following the acquisition, Paladin initiated a Bankable Feasibility Study which was completed in April 2005. This BFS confirmed that the Project could generate highly attractive returns using defined reserves only.

Site works began in September 2005 and the construction and staged commissioning of the LHM was successfully achieved on 28 December 2006.

The mine was officially opened by the President of Namibia on the 14th March 2007 and the first commercial product shipment occurred in the same month. The operation achieved nameplate production Stage 1 in December 2007 and Stage 2 expansion nameplate in November 2009.

NAMIBIA

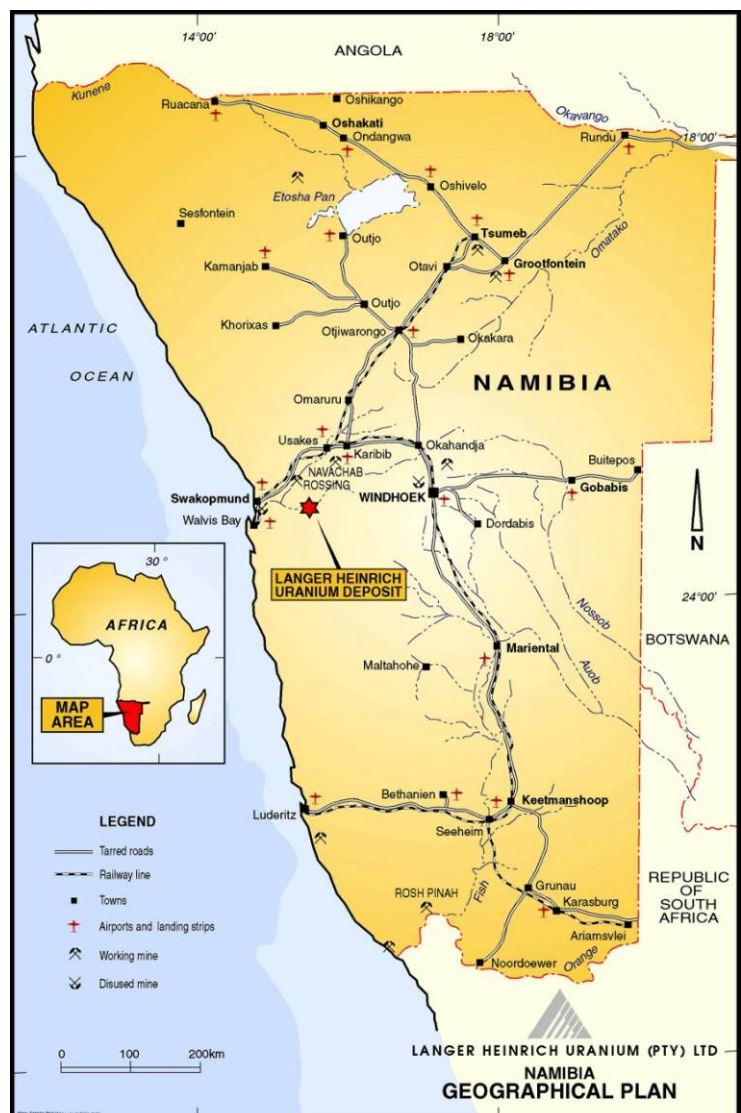
Namibia is a politically stable country with excellent infrastructure and an established diverse mining industry involving uranium, diamonds, gold and base metals.

The Namibian Government actively encourages growth of its mining industry, which is a solid contributor to the country's economy. Operating mines include the Rossing Uranium mine, located 40km north of the project, which has been in production since 1976.

PROJECT HISTORY

Following the discovery of the calcrete hosted uranium mineralisation in the early 1970's, Gencor conducted an extensive project evaluation over an 8-year period up until 1980. The study indicated that the Project had good potential for development but it was subsequently placed on care and maintenance due to depressed uranium prices.

In 1998 the Project was sold to the Australian listed public company, Acclaim Uranium NL ("Acclaim") who also completed a highly favourable Pre-Feasibility Study. However, adverse uranium market conditions and low prices in the late 1990's again curtailed development and Acclaim sold its holding in the Langer Heinrich Uranium (Pty) Ltd to Paladin in 2002.





GEOLOGY

Uranium mineralisation at Langer Heinrich is associated with the calcretisation of valley-fill fluvial sediments in an extensive tertiary palaeodrainage system. Calcrite is a secondary, chemically precipitated limestone that forms under arid to semi-arid climatic conditions.

The uranium mineralisation occurs as carnotite, an oxidised uranium and vanadium secondary mineral. The deposit occurs over a 15km length in seven higher grade pods (see Details 1 to 7 in the figure below) within a lower grade mineralised envelope. The carnotite occurs as thin films lining cavities and fracture planes and as grain coatings and disseminations in the calcretized sediments. Mineralisation is near surface, 1m to 30m thick and is 50m to 1,100m wide depending on the width of the palaeovalley

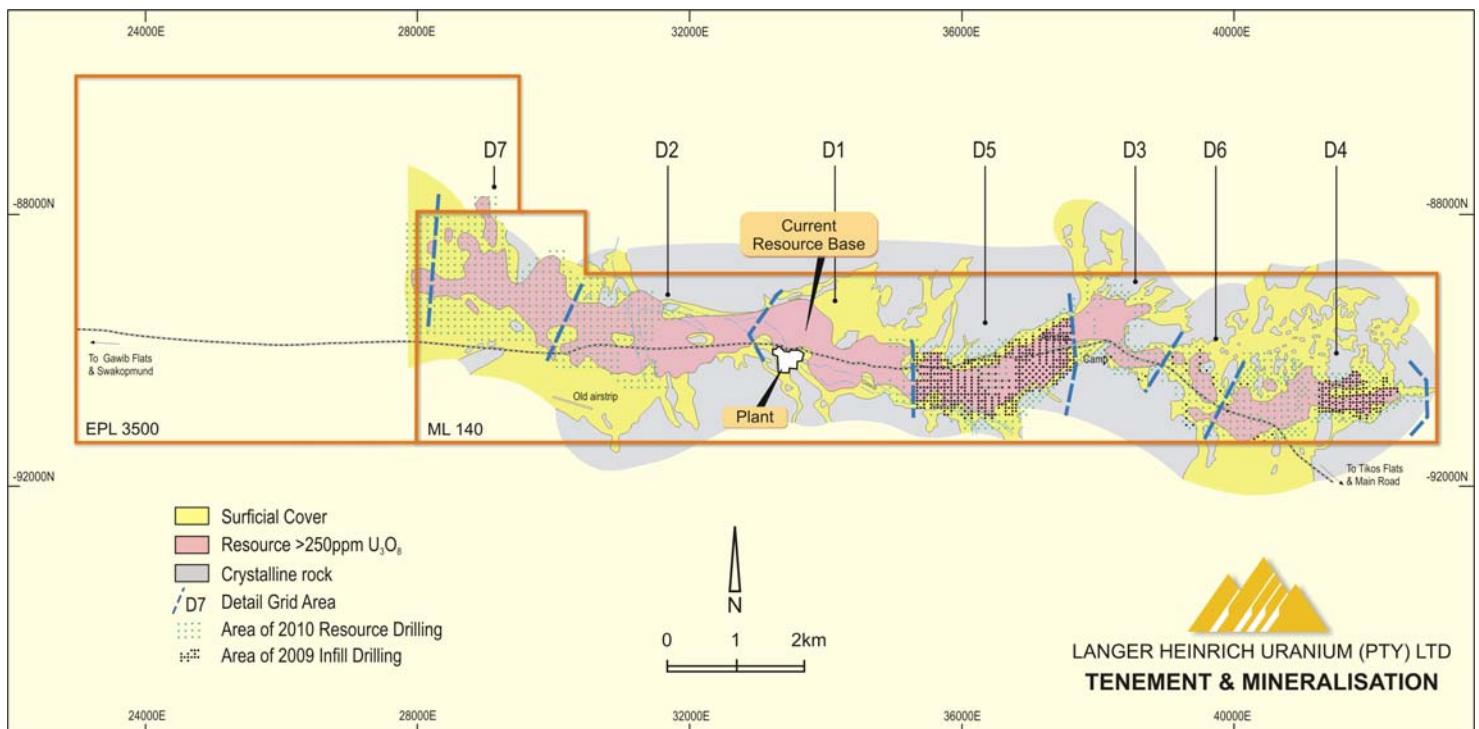
After calcretisation and uranium deposition, parts of the host sediments were eroded as a result of uplift and rejuvenated river flows. The present day Gawib River has dissected and modified both the calcrite and associated mineralisation. In places this prevailing ephemeral drainage system has blanketed the deposit with up to 8m of river sands and scree.

MINERAL RESOURCES

Further drilling and detailed resource studies have increased the mineral resource and identified significant upside potential outside areas of known mineralisation.

At a 250ppm U_3O_8 cut-off grade the current Mineral Resource contains 46.7Mt at 0.055% for 24,838t U_3O_8 in the Measured category, 77.6Mt at 0.055% for 42,921t U_3O_8 in the Indicated category and 18.5Mt at 0.06% for 10,910t U_3O_8 in the Inferred category. These Mineral Resources conform to both the JORC (2004) and NI 43-101 guidelines and are quoted inclusive of any ore reserves.

Ore Reserves has been announced and reported conforming to both JORC and NI 43-101 guidelines. Based on the current reserve of 110.2Mt at 0.055% for 60,951t U_3O_8 the Project has a mine life of a minimum of 20 years, based on increased Stage 3 production rates. These reserves will be used for Stage 4 plant upgrade planning with the Stage 4 definitive feasibility study expected to be completed in the second half of CY2011.



PROCESS DESCRIPTION

With the uranium being present as a coating on the sediments it is not necessary to grind the material finer, but only to remove the surface layer from the individual grains. As a consequence the process employs crushing and scrubbing to break down agglomerates into individual grains and to remove the uranium minerals from the grain surfaces.

Cyclones and screens are then employed to separate the high grade fines (Leach Feed) from Barren Discard material. Typically the Barren solids will contain 40-50% of the solids mass but only 5-10% of the uranium in the ROM feed.

After thickening, the Leach Feed slurry is conditioned with carbonate and bi-carbonate, heated and pumped to the leach circuit.

After leaching and heat recuperation, the slurry is fed through a Counter Current Decantation (CCD) circuit in which the high grade uranium solution is removed from the solids.

This solution undergoes further clarification before being pumped through fixed bed ion exchange columns where the uranium is recovered onto resin.

Uranium is stripped from the resin and precipitated as Sodium Diuranate (SDU) then redissolved using Sulphuric Acid before being re-precipitated with hydrogen peroxide. This product is dewatered, dried and drummed as UO_4 .

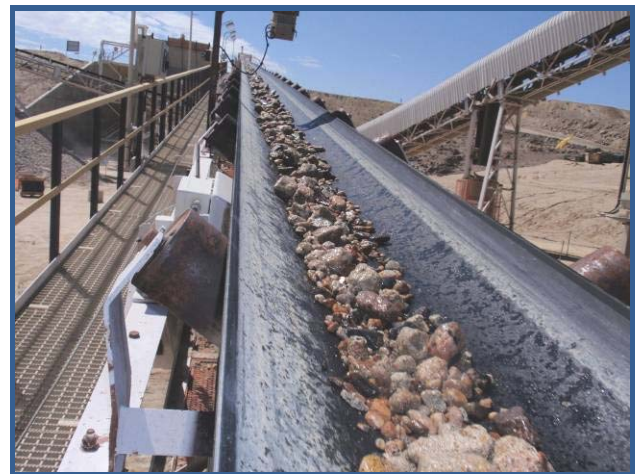
IMPROVING URANIUM MARKET

The spot price for uranium has been negatively affected by the general economic turbulence over the last eighteen months which largely reflects conditions in the commodity investment sector but not in the primary market for nuclear fuel. The medium and long term outlook for uranium is extremely buoyant and is underpinned by a fundamental imbalance between increasing demand for uranium to fuel existing and new reactors and the inability of the current uranium supply sector to significantly increase production.

The spot market for uranium (near-term delivery within twelve months) traditionally accounts for only 10-15 percent of annual transactions. However the entry of investment funds and other financial participants has seen the spot market increase in volume and volatility with a pronounced rise in activity during 2008 and 2009 and also in 2010. Spot prices moved through a range from US\$42.50/lb U_3O_8 in January 2010 to a low of US\$40.50/lb U_3O_8 in March and remaining in the low to mid \$40's/lb until beginning a strong recovery to reach US\$70/ lb U_3O_8 in January 2011. The relevant long term price indicator has exhibited less volatility during the recent downturn, moving from US\$62/lb U_3O_8 in January 2010 down to US\$58/lb U_3O_8 in March before recovering to US\$65/lb U_3O_8 in December 2010.



IX CIRCUIT AND SOLUTION STORAGE TANKS



CRUSHER RECYCLE CONVEYOR



OVERALL PLANT VIEW



MINING AND LOADING



AERIAL VIEW OF MINE SITE

PRODUCTION EXPANSIONS

Commissioning of the US\$50M Stage 2 production expansion to 3.7Mlb U₃O₈ per year has been completed and nameplate production was achieved shortly thereafter in November 2009.

Construction of the Stage 3 expansion to 5.2Mlb/a is well advanced and is scheduled for commissioning in March quarter 2011. This Stage 3 expansion involves a new

crushing and scrubbing circuit plus expansions to the leach, counter current decantation (CCD), ion exchange (IX) and tailings disposal facilities.

In addition, work has already started on a Bankable Feasibility Study for a further major expansion which will lift production from this world class ore body to around 10Mlb/a by 2014.

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