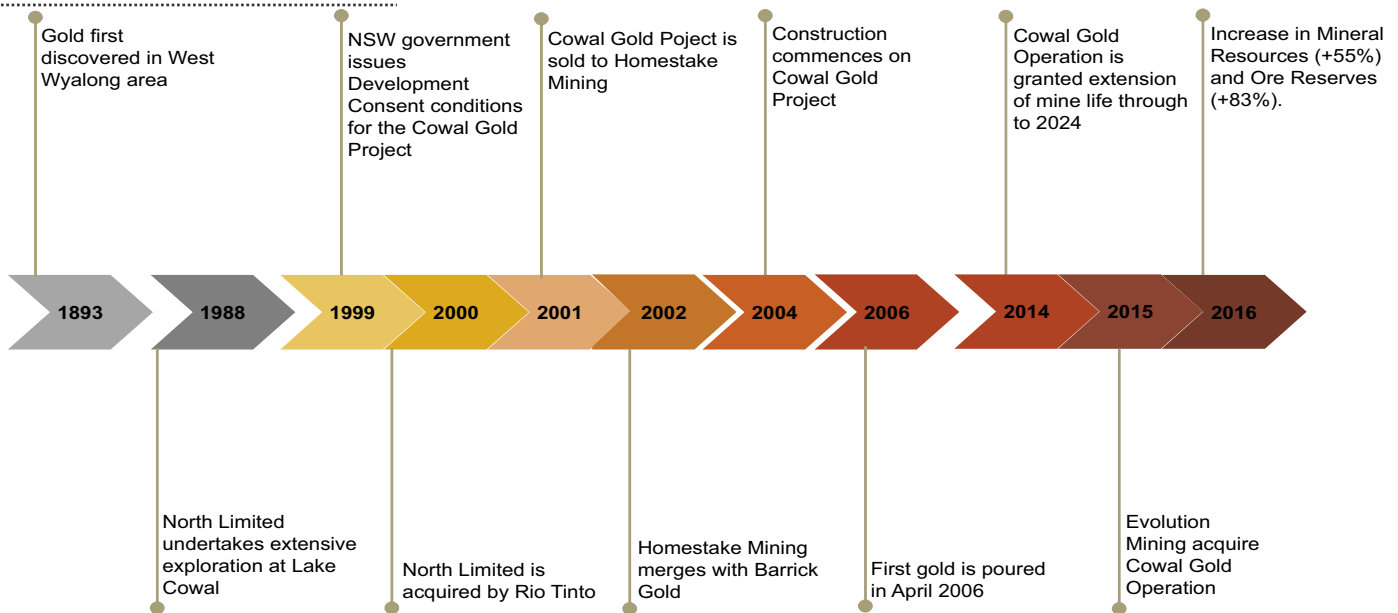


Overview

Evolution Mining is a leading, growth focussed Australian gold company, forecasting to produce between 800,000oz and 860,000oz gold in FY17. Our company has continued to grow through acquisition, completing the acquisition of Cowal in July 2015, Mungari in August 2015 and the Ernest Henry transaction in November 2016. Cowal gold operation is forecast to produce between 245,000oz and 260,000oz in FY17.

Location: 350km west of Sydney
Producing: Gold
Site management: Jason Greive - General Manager
Mine Site contact number: +61 2 6975 4700

History



Geology

The Cowal gold deposits (E41, E42, E46, Galway, and Regal) occur within the 40km long by 15km wide Ordovician Lake Cowal Volcanic Complex, east of the Gilmore Fault Zone within the eastern portion of the Lachlan Fold Belt. The overall structure of the gold deposits is complex but in general consists of a faulted antiform that plunges shallowly to the north-northeast. The deposits are aligned along a north-south orientated corridor with bounding faults, the Booberoi Fault on the western side and the Reflector Fault on the eastern side (the Gold Corridor).

The E41 West mineralisation strikes north-northeast and dips -70° east, and measures 750m along strike and 250m across strike. Individual mineralised zones are 35m to 50m wide and extend down dip for 125m. The E41 East mineralisation strikes east-west and dips -35° to -80° south, and measures 475m along strike and 500m across strike. Individual mineralised zones are 35m to 50m wide and extend down dip for 225m.

The E42 deposit comprises the Regal/Galway corridor and the E42 Main Zone. The Regal/Galway corridor trends north-south, dips vertical to -70° west, and is composed of small and discontinuous lenses. The corridor is approximately 900m along strike and 200m wide. The E42 Main Zone trends north-south and dips -35° to -45° west. The two principal domains in the E42 Zone are separated by the Cowal Fault. Overall, the E42 Main Zone mineralisation is approximately 850m by 850m and extends 500m down dip.

The E46 deposit is subdivided into the East and West zones. The East zone is a continuation of the Regal/Galway corridor, trends north-south, dips vertical to -70° west, and extends approximately 750m along strike and 175m across strike. Individual lenses in the E46 East mineralised zone are 1.0m to 15m wide, 25m to 250m long, and extend 50m to 200m down dip. The E46 West mineralisation trends north-northeast, dips -40° west to flat-lying, and measures approximately 650m along strike and 17m across strike. Individual zones are approximately 50m wide and extend 200m down dip.

Reserves: 99.40Mt @ 0.89g/t gold for 2,848koz Au

Resources: 116.71Mt @ 0.85g/t gold for 3,200koz Au



Mining

Mining production is derived from a single open pit, utilising conventional drill and blast, load and haul methodologies, mining nominally 9m benches in flitches. The operation is scheduled to continue until FY25 and the processing until FY33 at current estimates. The LOM strip ratio is currently 1.27:1.

Mining method/s:	Drill, blast, load and haul
Ore mined:	7.7Mt per annum (FY16)
Waste mined:	4.0Mt per annum (FY16)
Mine work roster:	7/7
Haulage/mine trucks:	13 x CAT 789 trucks, 3 x CAT 785 trucks
Shovels/excavators/loaders:	2 x Liebherr 994B, 1 x Hitachi EX3600, 2 x CAT992G loaders, 1 x CAT 385 excavator
Dozers:	3 x CAT D10T dozers, 1 CAT834H wheel dozer
Haul road maintenance regime/equipment:	2 x CAT16H graders, 1 x CAT 345 excavator, 2 x CAT water carts
Drilling equipment:	2 x Atlas Copco D65 (contractor), 2 x Terex SKF drills
Explosives:	AN suspension / Daveytronic & Nonel detonation
Blasting contract services:	Maxam Australia P/L
Mine survey equipment/products:	Surpac / Trimble survey equipment
Geotechnical equipment/products:	MineSight, Prism monitoring
Mine planning software:	Surpac, MineSched, Whittle



Processing Plant

Ore treatment/processing method/s:	Crush-grind-float-regrind-CIL
Annual average throughput rate:	(FY14): 7.3Mtpa; (FY15): 7.2Mtpa; (FY16): 7.1Mtpa
Nameplate capacity of plant:	6.4Mtpa
Crushing plant total capacity:	1,800tph
Power:	AGL energy supply
Primary crushing:	Metso 54-75 Superior MK-II gyratory crusher
Grinding Plant Equipment:	FFE 36' x 20.5' SAG. FFE 22' x 36.5' ball mill
Grinding Media:	Forged steel, 125mm balls (SAG mill), 105mm balls (ball mill)
Screening plant/equipment:	Schenck Vibrating (SAG discharge), Delkor Linear (COF)
Recycle crusher:	2 x Sandvik H6800 hydrocone cone crushers
Mineral liberation/recovery method:	Flotation, regrind, CIL of concentrate
Mineral liberation plant/equipment:	2 x SK1200 and 10 x OK200TC (flotation), Metso Vertimill (VTM1000WB) and 2 x Metso 355kW SMD's (regrind), 4,000m ³ Pre-Ox, 2 x 4,000m ³ and 6 x 1,000m ³ CIL Tanks
Gravity circuit:	Falcon Concentrator / Acacia Reactor
Process pumps:	Krebs UMD 18x16
Chemicals/reagents used:	Orica (Cyanide), Ixom (Hydrochloric acid, sodium hydroxide, sulphuric acid, SMBS, PAX), BOC (Oxygen), Boral (Lime), Solvay Interlox (Hydrogen peroxide), SNF (Flocculant)
Refining plant/equipment:	10t AARL elution circuit, ANSAC regeneration kiln
Process control system:	Yokogawa DCS
Maintenance system:	Pronto
Production work roster:	42 Evolution employees, rosters (5/2/4/3), (7/7)
Maintenance work roster:	31 Evolution employees, rosters (5/2/4/3), (7/7)

General

Accommodation:	Residential accommodation in West Wyalong
Mine Workforce:	404 employees & contractors
Safety/Environment/Community:	Evolution strives to enable all work activities related to its operations to be carried out safely and with all reasonable measures taken to remove or reduce risks to the health, safety and welfare of personnel, plant and equipment. Evolution is committed to attaining an outstanding level of environmental performance in all of its workplaces and has a strong corporate culture and a commitment to proactively and positively engage with the communities in which we operate. We recognise the need to consult with and understand the values, needs, beliefs, traditions and sensitivities of the communities in which we operate



Process Flowsheet

