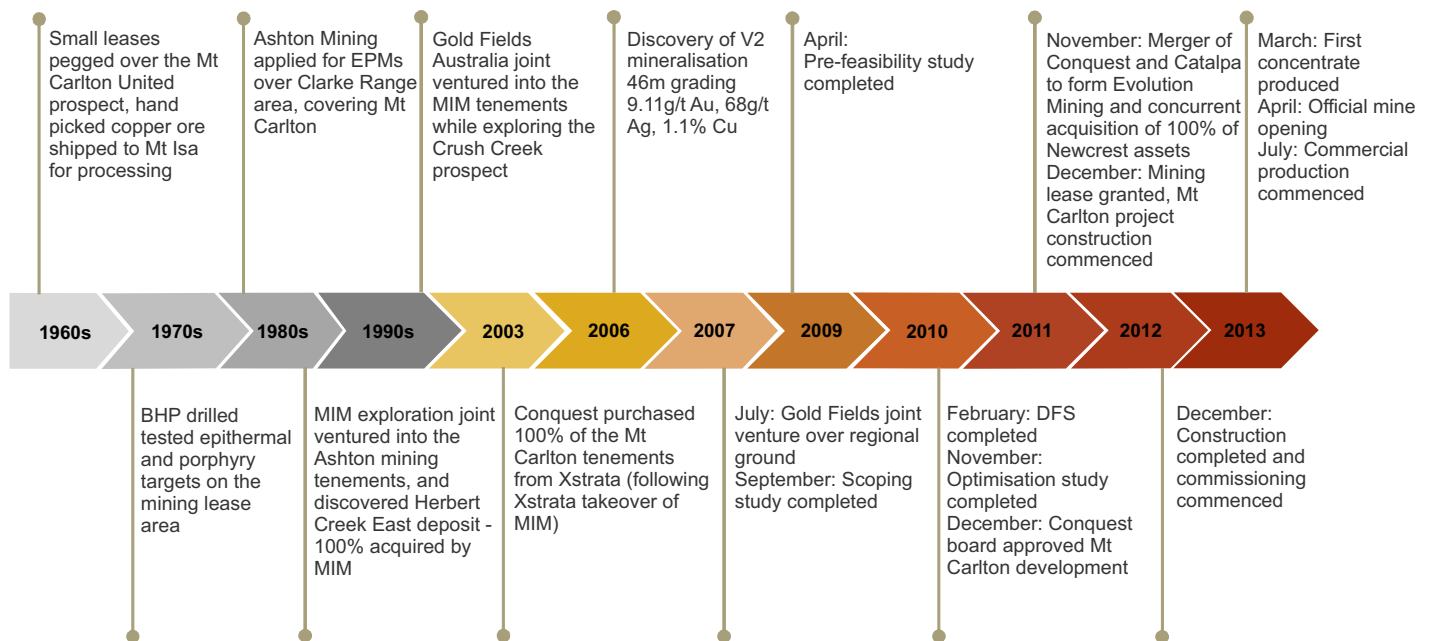


Overview

Evolution Mining is a leading growth focussed Australian gold company forecasting to produce between 800,000oz and 860,000oz gold in FY17. It is also the largest gold producer in Queensland and is expected to produce between 260,000oz and 285,000oz gold from its three Queensland assets. Mt Carlton is expected to produce between 90,000 and 100,000 gold equivalent ounces at a AISC of A\$675 - A\$725/oz in FY17.

Location:	150km south of Townsville
Producing:	Gold, silver and copper
Site management:	Richard Hay – General Manager
Mine Site contact number:	+61 7 4422 0100

History



Geology

The Mt Carlton project is a high sulphidation epithermal style deposit with mineralisation occurring within felsic volcanic rocks on the northern margin of the Permian Bowen Basin. The project is comprised of gold, silver and copper. Later andesitic volcanoclastics overlies a rhyolitic sequence which in turn underlies a package of sediments and conglomerates. Mineralisation is structurally controlled which is exclusively hosted within the advanced argillic altered rhyodacite. Discrete and discontinuous steeply dipping ENE trending breccia dominated quartz - sulphosalt infilled veins form high grade bonanza lodes. Paragenetically, the sulphosalts replace sphalerite and galena which are associated with late stage copper sulphides. Coarse gold occurs as small grains (0.1 mm) at quartz-sulphide infill contacts and in sulphosalts. Basaltic/doleritic dykes which mirror pre-existing structures cross cut mineralisation.

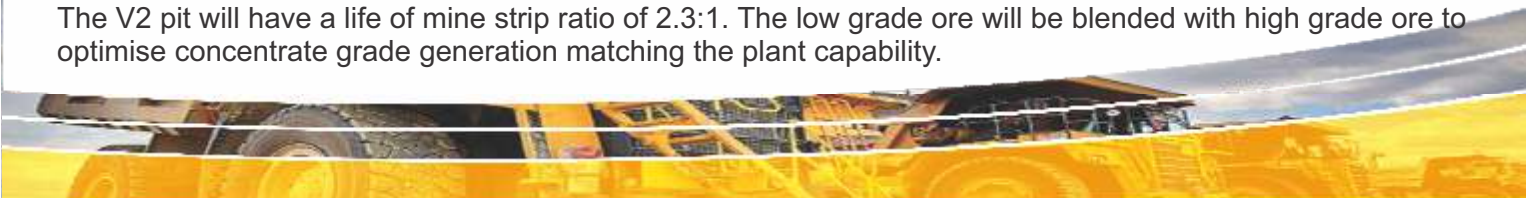
Reserves: 4.84Mt @ 4.70g/t Au for 733koz

Resources: 10.42Mt @ 2.92g/t Au for 979koz

Mining

Mining production is derived solely from the V2 deposit following the completion of the silver rich A39 deposit in FY14. The V2 deposit is flat lying and situated 20m to 180m below surface and is approximately 70m thick with a 500m by 500m areal extent. Mining is by conventional drill and blast, load and haul methodologies, mining 5m benches in 2.5m flitches.

The V2 pit will have a life of mine strip ratio of 2.3:1. The low grade ore will be blended with high grade ore to optimise concentrate grade generation matching the plant capability.



Mt Carlton CONT



Mining CONT

Mining method/s:	Conventional open pit mining
Ore mined:	0.93Mt ore per year (FY16 budget)
Waste mined:	3.0Mt per year (FY16 budget)
Mining contractor:	Owner operator
Mine work roster:	8/6 days day shift / night shift rotation
Haulage / mine trucks:	3 x Caterpillar 777F dump trucks
Shovels / excavators / loaders:	1 x 1200 excavator, 2 x Caterpillar 980 loaders
Dozers:	1 x Cat D10N
Haul road maintenance regime/equipment:	1 x Caterpillar 14M grader, 1 x Caterpillar 769 water truck
Drilling equipment:	2 x Panterra 1500, 1 x Panterra 1100, 1 x Atlas Copco L8
Explosives:	MAXAM water gel 8,000-10,000
Blasting contract services:	SRG
Mine communications products/systems:	Digital two-way radio communications via repeater station
Mine survey equipment/products:	Leica GPS / solar power base station / repeater
Mine planning software:	Surpac, MineSched, Leapfrog



General

Drive in Drive out service provider(s) Detour Coaches with buses to Townsville and Bowen

Accommodation: Available for up to 200 people

Mine workforce: 165 employees & contractors

Approximately 20-25% employees are local from Bowen Ayr Burdekin region. Apprenticeships and traineeships draw on the local community for these roles

SafetyEnvironment/Community: Evolution strives to enable all work activities related to its operations to be carried out safely and with all practicable measures taken to remove or reduce risks to the health, safety and welfare of personnel, plant and equipment. Evolution is also committed to attaining an outstanding level of environmental performance in all of its workplaces

Community: Evolution has a strong corporate culture and commitment to proactively and positively engage with the communities in which we operate. We recognise the need to proactively consult and understand the values, needs, beliefs, traditions and sensitivities of the communities in which we operate. Our community-focused programs are built around the belief that working collaboratively leads to more appropriately targeted and sustainable social initiatives

Processing Plant

Ore treatment / processing method/s:	Crushing, grinding and bulk sulphide flotation to produce a polymetallic concentrate
Nominal treatment rate:	Design capacity of 800,000tpa
Delivery:	Concentrate trucked to port in Townsville and shipped to Shandong, China. Trip from Townsville port to smelter takes around three weeks for gold concentrate
Sale agreements:	Guoda Gold Co Ltd: Gold concentrate from V2 deposit
Annual average throughput rate:	103tph (FY15). Design 100tph
Crushing plant total capacity:	250tph
Power:	National grid via Ergon Energy
Primary crushing/grinding plant/machinery:	Single stage crushing, single toggle jaw 1,067mm x 760mm, feed size 500mm, produce size P80 120mm
Grinding plant equipment:	Single SAG mill (7.32m x 3.8m EGL) with 32,000kW installed power, steel lined, 24 x 20mm discharge grates, trommel grate discharge with trommel screen, classification Warman Cavex 400mm cyclones
Grinding media:	Blend of 125mm and 105mm forged steel balls
Screening/plant equipment:	Trash screen horizontal vibratory 1.2m x 3.0m, polyurethane deck 13mm x 1.2mm cross flow slots
Recycle crusher:	2 x Sandvik cone crushers, nominal CSS of 8mm
Mineral liberation plant/equipment:	Flotation circuit consists of 6 x Metso RCS 40 cells (Rougher/Scavengers) & 9 x Metso RCS 5 cells (cleaners), 2 x IsaMill M500 (regrind mill)
Mineral recovery plant/equipment:	Delkor concentrate thickener (8.0m), 2 x concentrate storage tanks, Outotec LAROX Pf1052 filter press, Delkor tailings thickener (14.0m)
Process pumps:	Majority of process pumps Warman, split casing. Cyclone feed pumps Warman 1500EE-MCU. Tails pumps Warman 4/3DD-AH
Chemical/reagents used:	PAX (Potassium Amyl Xanthate), DSP009 (Thionocarbonate collector), frother, flocculant, lime
Final product storage handling:	2 tonne capacity bulk storage bags are filled with filtered concentrate via a materials handling screw. Bags are transported to Townsville storage facility to await shipment
Process control system:	Citect SCADA
Maintenance system:	Pronto
Processing and maintenance work roster:	4 shifts, 8/6 roster



View of Mt Carlton plant at night

Process Flowsheet

