

Quarrying the Stone

Cameron's quarry is located 7 km south-west of the township of Buchan in East Gippsland on the southern boundary of the Cameron family property and the adjoining crown land. The stone is a dense crystalline limestone of the Buchan Caves formation, deposited in the mid Devonian era. As such, it is not marble in the strict geological sense of truly metamorphosed limestone, but it is capable of sustaining a fine polished finish and is referred to as marble within the dimension stone industry.

Dimension stone was extracted from the quarry using the traditional drill and plug & feather method. A series of about 25mm diameter holes at 150 to 200mm centres were drilled using a hand operated pneumatic percussion drill along the line of the desired parting. Two half-round steel shims or 'feathers' with a tapered inner face were then placed in the top of each of the drilled holes and a protruding 'plug' with matching opposite taper inserted between them. With all the holes so fitted, the quarryman then proceeded to strike the head of each plug in turn with a sledge hammer and repeating the sequence until – if all went well – the rock fractured along the line of weakness formed by the drilled holes. Drilling of the bedrock in the quarry face could be vertically from the top and/or horizontally from within the quarry pit.

Once separated from the quarry face, large slabs, such as initially cut for the shrine columns, could be pulled over using a hand operated winch typically otherwise used for tree grubbing. They could then be further drilled and subdivided using the plug and feather technique to obtain rough-cut stone of the size ordered by the stonemason. This was the case for the 28 ft (8.5m) long, 10 tonne, square-section blocks cut for the shrine columns. A key skill of the lead quarryman was to select sound rock from which to extract the required dimension stone to fulfill a particular order. An initially undetected hairline crack or other fault could negate days of effort in drilling and plug and feather separation of the slab. This was especially so in the case of the large sections required for the shrine columns that were the biggest order the quarry ever received.

Cameron's quarry was worked intermittently from around 1910 until the mid 1930s, using a small loyal team of local labour under master quarryman, Martin Cameron. When an order was received for the stone for the shrine columns, the quarry crew worked seven days a week to successfully fulfill the contract.

Compressed air for the hand operated pneumatic percussion drills was originally supplied by a steam driven, direct-acting air compressor with an associated on-site portable style steam boiler. There was also an auxiliary belt driven air compressor that was later powered from the drive pulley of a Fordson tractor. The only other limited mechanization at Cameron's quarry comprised two hand operated stiff legged cranes for lifting the stone blocks. One crane was located at ground level beside the quarry pit whilst the other was positioned on the quarry floor.

Cut stone was transported from the quarry to the railhead at Nowa Nowa by means of a horse drawn dray owned by the Cameron family. Large and heavy loads such as the individual ten tonne pieces for the shrine columns were a particular challenge, with the horses straining on uphill sections and a large log dragged behind to assist with braking on the down grades. In the rail yard, a further fixed manually operated crane lifted the stone pieces off the dray and later loaded them onto rail wagons for shipment, usually to Melbourne. At the receiving end, a stonemason shaped each block to the required finished dimensions and polished the exposed faces prior to delivery and erection at the ultimate building site or other final location.

The extraction of dimension stone from Cameron's quarry effectively ceased in the early 1940s. A decade later, the main northern pit was worked under lease by APM to obtain high quality crushed limestone for use at its Maryvale paper mill. APM set up electrically operated crushing plant adjacent to pit and, in contrast to the past, used explosive charges to break the rock away from the quarry workfaces. As a result, the quarry pit was enlarged and most evidence of the original dimension stone extraction obliterated. The telltale marks of a line of evenly spaced drill holes in several abandoned stone blocks adjacent to the small southern section that was occasionally used to obtain a darker stone comprise the few reminders of the former endeavours.