new information leading to revisions of changes to areas under vine and grape produced in 2008 due to significant

time, about 45 million years ago. They were formed by down-faulting basins, the Willunga and Noarlunga Adelaide and lies within two triangular

 Complex Wine

Ngaltinga Formation overlying Hallett Cove and between Pertaringa and Kangarilla. Surface

The Pirramimma Sandstone consists of a sequence of red, orange and brown

Quaternary Age units (Holocene)

Quaternary Age units (Pleistocene)

Christie’s Beach Formation on Rogers Road, Sellicks Hill

This formation is well drained and consists of red, orange and brown

The earliest vineyards in the McLaren

Chapel Hill Wines to Pirramimma Wines

Vines growing on the Ancient Rocks on the high side of the Willunga Fault north east of Willunga

Other notable vineyards on the Ancient

Many of the oldest vineyards were

Vineyards were established on

Vineyards on the Ancient

Lofty and Flinders Ranges.

sands are often grown with

Although vines do not come into direct

Aquifers that could be used

groundwater in low lying and swampy

cliffs along the coast, in sand quarries at

Numerous road cuttings near Seaview

sand, silt, clay and gravel deposited by

sea advanced over the land, with wave

sand, silt, clay and gravel deposited by

TERTIARY AGE UNITS (SUGARBEANS)

Alluvial Clays of Valleys

McLaren Vale Geology Pits

The Alluvial Clays of Valleys at Wirra Wirra Wines

In the Willunga Embayment, vineyards

Lower rainfall was generally

viticulture being established preferentially

were often accessed by plants for water and

soils and lower rainfall was generally

within an area. In McLaren Vale, soils are

consist of the resultant mineral particles

geological formation remain a major

link between geology and fruit.

are often grown with

than soil as it encompasses other factors

Creation is capable of producing

The essence of minerals incorporated in

Composed of calcium carbonate

gauged by the predominant soils at any one

with occasional sandy interbeds. It occurs

however the soils are often very thin

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GEOLOGY OF THE McLaren Vale WINE REGION

WASTEWATER TREATMENT PLANT

GDA 94

CAPE JERVIS FORMATION: Pebbly and bouldery claystone; Carboniferous–Permian (c. 300 million years)

BLANCHE POINT FORMATION: Glauconitic, fossiliferous Eocene (56 to 34 million years)

PORT WILLUNGA FORMATION: Fossiliferous limestone

HALLETT COVE SANDSTONE: Calcareous fossiliferous sandstone

PIRRAMIMMA SANDSTONE and SEAFORD FORMATION:

KURRAJONG FORMATION: Clayey sand and silica-cemented

OCHRE COVE FORMATION: Iron-mottled pebbly sandstone

CHRISTIES BEACH FORMATION: Alluvial fan clay, sand and gravel

Alluvial clay of valleys

Talus gravel, sand and clay

Alluvial sand in active stream channels

Beach gravel

SEMAPHORE SAND MEMBER: Coastal dune sand

SEMAPHORE SAND MEMBER: Quartz beach sand

TORTACHILLA LIMESTONE at base

Pliocene (5.3 to 2.6 million years)

GEOLOGY OF THE McLAREN VALE WINE REGION

SETONA FORMATION, Palaeocene (c. 65 million years)

BURRA GROUP: c. 750 million years

BRIGHTON LIMESTONE: Massive oolitic limestone

HEATHERDALE SHALE: Dark grey, slaty siltstone with black phosphate nodules

SANDY RIVER FORMATION: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

MONTACUTE DOLOMITE: Blue-grey, thinly bedded dolomite

BUTCHART SHALE: Dark grey, very thinly laminated, slaty siltstone

BROOKLYN DOLOMITE: Blue-grey, very thinly bedded dolomite

NORTH MUD GELL and SOUTH MUD GELL: Brecciated shale

CHRISTIE BEACH SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

SHOREMOUTH SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

MONTVILLE SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

MENDALE SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

MOORLAND SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

LENNOX SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

BOWRAL SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

BELLACHRA SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

ARKONA SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

MELVILLE SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

DARKHAM SHALE: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

Woolshed Formation: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

Belair Subgroup: Laminated, grey siltstone

Burra Group: Brecciated Woolshed Flat Shale

Claypan Subgroup: Laminated, grey siltstone

Tithe Beds: Laminated siltstone

GEOLOGY OF THE McLAREN VALE WINE REGION

SOUTH MOUNT LOFTY RANGES

GEOLOGY OF THE McLAREN VALE WINE REGION

SOUTH MOUNT LOFTY RANGES

Powderham Group: Brecciated Woolshed Flat Shale

Bakewell Group: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

Parsnip Beds: Calcareous siltstone and sandstone; intraclastic and stromatolitic limestone

Claypan Subgroup: Laminated siltstone

SOUTH MOUNT LOFTY RANGES

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