GEOLOGICAL SURVEY OF VICTORIA.

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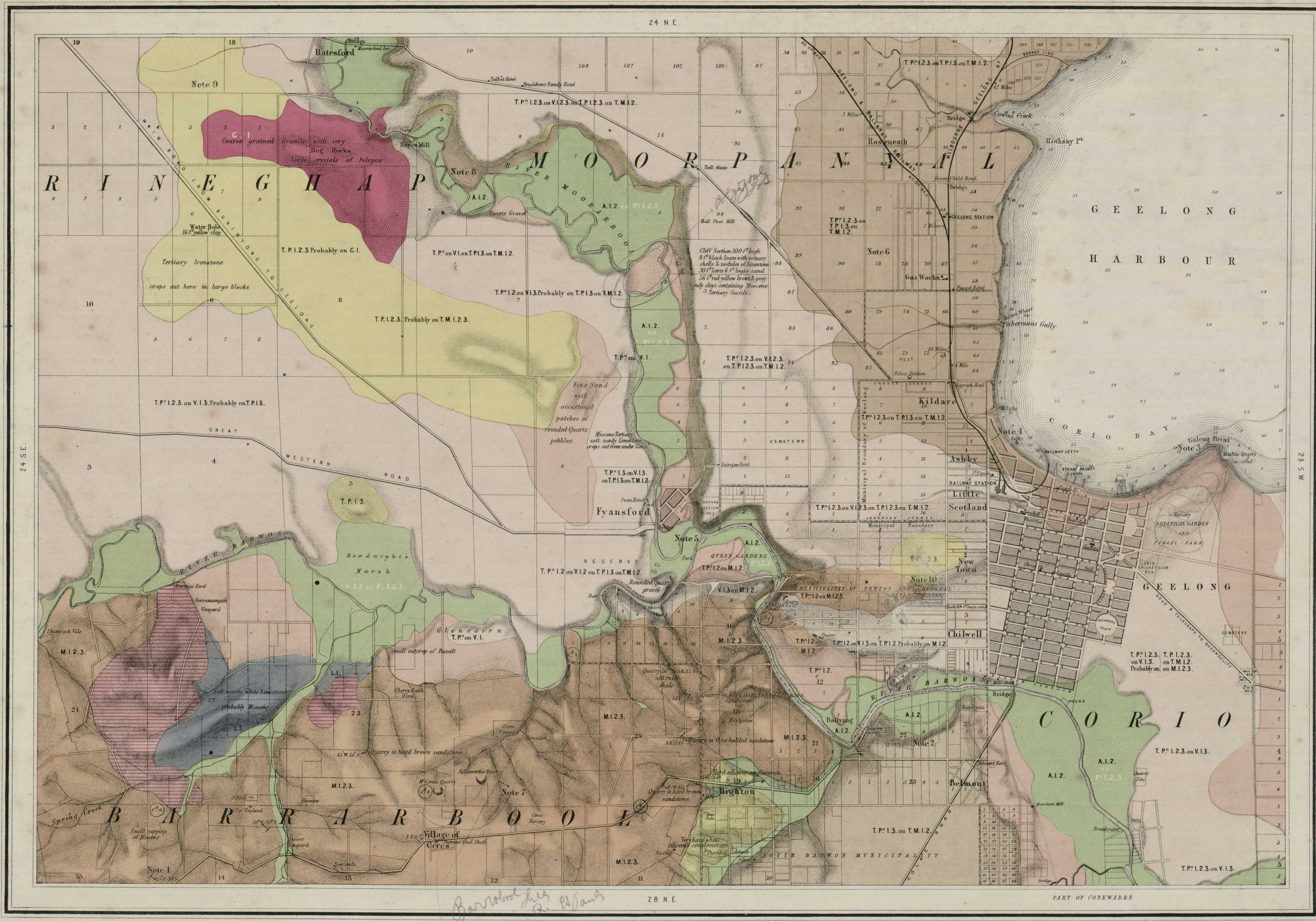

24 S.E

Note 1

Section of Carbonaceous Strata exposed in Road cutting 48 f.t thin bedded grey shale with interstratified thin bands of Calcareous sandy shale.

Note 2

Quarries in thin bedded sandy Limestone probably the uppermost beds of the Miocene Tertiary series.

Note 3

Quarries in fresh water Limestone of
7 f.t Marly clay
10 f.t Ferruginous sandy clay
3 f.t 6 in. Thin bedded Limestone
7 f.t very compact do.
6 f.t Rubbly thin bedded ferruginous poor Limestone on Miocene Tertiary sandy marl.

Note 4

Cliffs of soft brown sandy marl, representing part of the upper strata of the Miocene Tertiary series: beds with identical fossils and similar Lithological character occur at Spring C.k 16 Miles south of Geelong, and are there underlaid by 200 to 250 f.t of clays marls etc. of the same geological age. It is probable that an equal thickness of strata would be found in this locality, and also under the area occupied by Corio Bay.

Note 5

Cliff section.
15 f.t Basalt
10 f.t loose sand
70 f.t Red, yellow, brown and grey marls, clays, and sands containing abundance of fossils of the Miocene Tertiary period.

Note 6

The Miocene Tertiary sandy marls, clays, sand, and limestones underlie this area, but are more or less thickly covered with Pliocene Tertiary ferruginous sandstones, and sandy clays.

Note 7

From the Anticlinal Axis, marked on the Map as passing near M.rs Thomas's Shaft on the Bararbool Hills, to the junction of Noble and Packington St.s Newtown, a series of sandstones, shales and conglomerates, of the Carbonaceous Mezozoic period occur, the average direction of the dip over this area is E.30 S. at an inclination of 1 in 4; taking the distance between these points as 4000 Yd.s it will be evident that 3000 f.t of Carbonaceous strata crop out at the surface over this area, the highest beds will of course be found in Newtown and Chilwell, the lowest beds near M.rs Thomass Shaft: it is highly probable that this part of the Carbonaceous series has been tested for Coal in the Bellerine bores, since an intermediate Synclinal Axis exists in the low ground between Kensington & Geelong; and the Bararbool Hills sandstones and shales are a recurrence to the surface of those bored through at Bellerine. It will be seen on reference to the Map that great dislocation of the strata has taken place to the westward of M.rs Thomas's Shaft.

Note 8

The banks on either side the River at this point are occupied by Limestones of the Miocene Tertiary group, composed almost entirely of fragments of Polyzoa, the Per centage of earthy matter in it is very small and it would afford excellent lime for building purposes.

Note 9

Gold is reported to have been found here a few f.t from the surface Dec.r 1861; all the Shafts sunk shew about 6 f.t of Older Pliocene Tertiary Ironstone and Conglomerate, resting on brown and yellow sandy marl, abounding in Miocene Tertiary fossils: the thickness of this Miocene is uncertain, it probably rests on Granite, so that the conditions for a Gold Field are entirely wanting; the fact that a few grains of alluvial gold may generally be found in the Older Pliocene Tertiary Conglomerates, even at a distance of 50 Miles from a Quartz Reef, will account for the finding of small quantities of Gold both here and in Chilwell.

Note 10

Small quantities of Gold have been found in the Older Pliocene Tertiary drifts on the flanks of Newtown Hill, also in the Newer Pliocene Tertiary Quartz drift of Chilwell flat which there rests on the Basalt: in the one case the bottom would be the Carbonaceous Rocks; in the other the Basalt: the nearest known Silurian slates and sandstones with Quartz Reefs being the Steiglitz Ranges; the chance of these drifts containing payable Gold is very small indeed: the Conglomerate of the Dog Rocks being nearer the source of the Gold, should afford even more legitimate prospect for the Miner.

Printed at the Mining and Geological Department, Gov.t Printing Office, Melbourne, by J. Finnie & J.M. Ferguson.

Surveyed, Engraved and Published under the direction of Alfred R.C. Selwyn Gov.t Geologist, at the GEOLOGICAL SURVEY OFFICE MELBOURNE. *Frederick M.c Coy Palæontologist.*

Note. The Outline Compiled by J. Wilkinson, from Originals in the Surveyor Generals Department.

Geologically Surveyed by Rich.d Daintree, Field Geologist. 1861. assisted by C.S. Wilkinson.
Outline & Writing, Engraved by John L. Ross. Hills Lithographed by Rich.d Shepherd.
Published 1863.

- **Alluvial** — Recent fluviatile & swamp deposits on older rocks — A 1 Sand; A 2 Clay & Mud; A 3 Gravel Recent Gold drift
- **Post Pliocene** — Raised beaches Estuary beds & blown sand, Upper Gold drifts — P.1 1 Sand; P.1 2 Clay & Mud; P.1 3 Gravel & Conglomerate (Cement)
- **Newer Pliocene** (Overlying Basalt) — Marine & Freshwater — Flemington & Upper Brighton beds, Middle Gold drift — T P.n 1 Sandy beds; T P.n 2 Clay & Mud; T P.n 3 Gravel & Conglomerate (Cement)
- **Older Pliocene** — Marine & Freshwater — Brighton beds, Lower Gold drift — T P 1 Sandy beds; T P 2 Clay Shale &c.; T P 3 Gravel & Conglomerate (Cement)
- **Miocene** — Marine & Freshwater — Lower Brighton beds, Corio Bay & Portland — T M 1 Sandy beds; T M 2 Clay & Shale; T M 3 Gravel or Conglomerate (Cement)
- Thin capping on older rocks — T 1 Sand; T 2 Clay; T 3 Gravel
- **Limestone** . L. 1 Tertiary
- **Carbonaceous** (Mesozoic) — M. 1 Sandstone; M. 2 Shales & Mudstones; M. 3 Conglomerate
- **Upper Volcanic** (Pliocene) — V 1 Basalt Dolerite; V 2 Anamesite; V 3 Lava; V 4 Ash Conglomerate Breccia &c.
- **Trap or Hypogene** — T H 1 Greenstone Diorite; T H 2 Felstone; T H 3 Felspar Porphyry
- **Granite** — G 1 Ternary: Quartz Felspar or Hornblende or Quartz Mica & Felspar; G 2 Binary: Quartz & Mica or Quartz & Felspar; G 3 Quarternary: Quartz Mica Felspar & Hornblende or Schorle

Deposits of sand clay & gravel of the age of the upper Gold drifts "Diluvial" or Post Pliocene occur at intervals along the course of all the valleys. These deposits are frequently cut through & redistributed by existing river action during floods forming Alluvial A.1.2.3. Recent Gold drifts.

Scale — Two Inches to a Mile.

80 Chains, 60, 40, 20, 0, 40, 80, 120, 160 Chains — 2 Miles
320 Perches, 240, 160, 80, 0, 160, 320, 480, 640 Perches

Dip — *Anticlinal line* — *Synclinal line* — + *Horizontal beds* — *Coal beds* — *Locality and mark of Specimen in the Museum* (R.d 10) — *Heights in feet are above Low Water mark in Hobsons Bay* — *Parish Boundary* — *Volcanic hills and Points of eruption*

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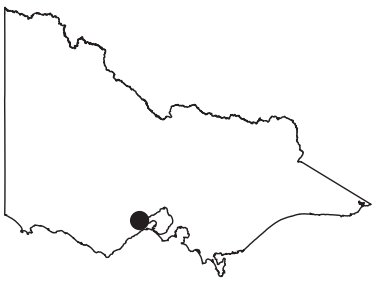

Quarter sheet 24SE Geelong (Daintree, 1861)

The area around Geelong was geologically important to Victoria in the mid-19th century—not for gold, but as a source of building stone which was in high demand in the decades after the gold rushes.

Daintree's map shows numerous basalt and sandstone quarries, together with a scattering of vineyards on the northern slopes of the Barrabool Hills.

The reserve for an orphan asylum at Fyansford gives an insight to the social policies of the time.