

1983/6. The Mt Lloyd coalfield

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Abstract

Four thin coal seams, all less than one metre thick, have been recorded in the Mt Lloyd area. None have been worked. The reserves are very small, the ground faulted, and prospects for future exploration are limited.

LOCATION AND ACCESS

The Mt Lloyd coalfield lies on the western flank of Mt Lloyd [DN967562], about 13 km south-west of New Norfolk, which is situated on the banks of the River Derwent and 32 km by road from Hobart. Few access tracks exist around Mt Lloyd.

GENERAL GEOLOGY

The geology of the area has been discussed by Burns (1957) and the results of drilling investigations are given in Burns (1959). Gulline (1959) mapped the area around Mt Lloyd in order to more closely define areas of coal-bearing potential. A compilation of all available mapping is given in Figure 1.

The coal seams occur in a fluviatile sequence of lithic sandstone with minor mudstone and shale (the upper division of the Upper Parmeener Super-Group). The sequence overlies economically barren quartzose sandstone of the middle division of the Upper Parmeener Super-Group, which crops out on the lower slopes of Mt Lloyd. The whole sequence dips to the west, under a dolerite sill capping Mt Lloyd. Transgressive and faulted dolerite contacts bound the coal-bearing area to the north, north-west, south, and south-west (Burns, 1957).

Burns (1959) reported a total of four coal seams in the area, the East 1, East 2, West 1 (also called East 3), and the West 2, together with a 150 mm thick 'seam' between the East 2 and West 1 seams. Gulline (1959) recorded a 0.56 m (22") thick seam from the Mt Lloyd area which was not previously recorded. This seam does not appear to be extensive. All four major seams are less than one metre thick.

Earlier workers have tried to correlate the four seams at Mt Lloyd with seams at Kaoota and Hamilton, using the eight seam classification of Hills *et al.* (1922). Burns (1959) correlated the seams at Mt Lloyd with those at Sandfly, concluding that East 1 = gamma; East 2 = eta; 6" (150 mm) = theta; West 1 = iota; and West 2 = kappa. On this basis he concluded that "two seams, alpha and beta, which may be of economic importance, are as yet undiscovered". The scheme of Hills *et al.* (1922) is far too simplified to be useful, and the seams at Mt Lloyd are totally unrelated to those at Hamilton and Sandfly save for the fact that they all occur in rocks belonging to the upper division of the Upper Parmeener Super-Group.

PREVIOUS MINING ACTIVITY

No actual producing mine is known to have existed on the Mt Lloyd coalfield, although prospecting works consisting of a number of pits, trenches and an adit 40' (12.19 m) long are recorded by Hughes (1955). Two adits are marked on a plan prepared by Burns (1959). The adits have collapsed and are no longer visible.

Some coal is known to have been 'mined' by digging into outcrops. A series of pits and trenches marked 'Teakles workings' in Figure 1 were being excavated in 1983. Five trenches were dug into the outcrop of the East 1 seam over a distance of 200 m.

COAL QUALITY

The coal is dull, but light, with few bright bands. The quality of the coal is fair, with the ash ranging from 22-29% for whole seam sections. The seams are very thin, usually less than one metre thick. Known analyses are given in Table 1. Part of the seam exposed in trenches at Teakles workings had burnt *in situ*, leaving a white-pink porous, chunky ash, in which the original banding of the coal could be clearly seen.

RECENT EXPLORATION

The Department of Mines drilled two holes in the area in 1959, the logs of which are given in Burns (1959). Part of the coalfield, near Crosswells Flat, is currently covered by a mining licence, on which some prospecting and limited mining activities (mining coal from outcrops) has been undertaken over the past three years. The remainder of the coalfield is currently held under exploration licence E.L. 29/82 by Marathon Petroleum Australia Limited.

POTENTIAL FOR FUTURE EXPLORATION

Due to the thin nature of the coal seams, the apparent limited area of potential reserve, the rugged terrain and number of known faults, the future of the coalfield is limited. The most promising areas for further investigation (Gulline, 1959) are those known as northern flat and southern flat, south of the Mt Lloyd township. The inferred reserves of the area are very small, probably less than two million tonnes.

REFERENCES

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Table 1. ANALYSES OF COAL FROM MT LLOYD

| Seam name | Seam thickness (m) | Sample thickness (m) | Moisture % | VCM % | FC % | Ash % | Sulphur % | Specific energy (MJ/kg) | SG |
|-----------|--------------------|----------------------|------------|-------|------|-------|-----------|-------------------------|------|
| East 1 | 0.89 | 0.89 | 4.6 | 15.9 | 50.5 | 29.0 | 0.28 | 22.0 | 1.54 |
| East 1 | 0.99 | 0.99 | 3.1 | 15.0 | 58.2 | 23.7 | 0.39 | 25.0 | - |
| East 2 | 0.84 | 0.46 | 3.3 | 19.0 | 55.5 | 22.2 | 0.50 | 25.4 | 1.50 |
| East 3* | 1.07 | 0.86 | 3.1 | 18.3 | 50.8 | 27.8 | 0.32 | 23.4 | 1.53 |
| West 1 | 1.14 | 0.53 | 3.3 | 13.7 | 55.0 | 28.0 | 0.34 | 23.5 | - |
| West 1 | 1.14 | top 0.165 | 2.4 | 10.1 | 23.3 | 64.2 | - | - | - |
| West 1 | 1.14 | bottom 0.99 | 3.1 | 15.0 | 52.4 | 29.5 | 0.27 | 23.0 | - |
| West 2 | 0.51 | 0.33 | 2.9 | 14.3 | 60.2 | 22.6 | 0.45 | 25.5 | - |
| West 2 | 0.51 | 0.51 | 8.0 | 29.9 | 39.1 | 23.0 | 0.34 | 20.7 | - |

* The East 3 Seam has also been called the West 1 Seam.

All analyses reported in Burns (1959).

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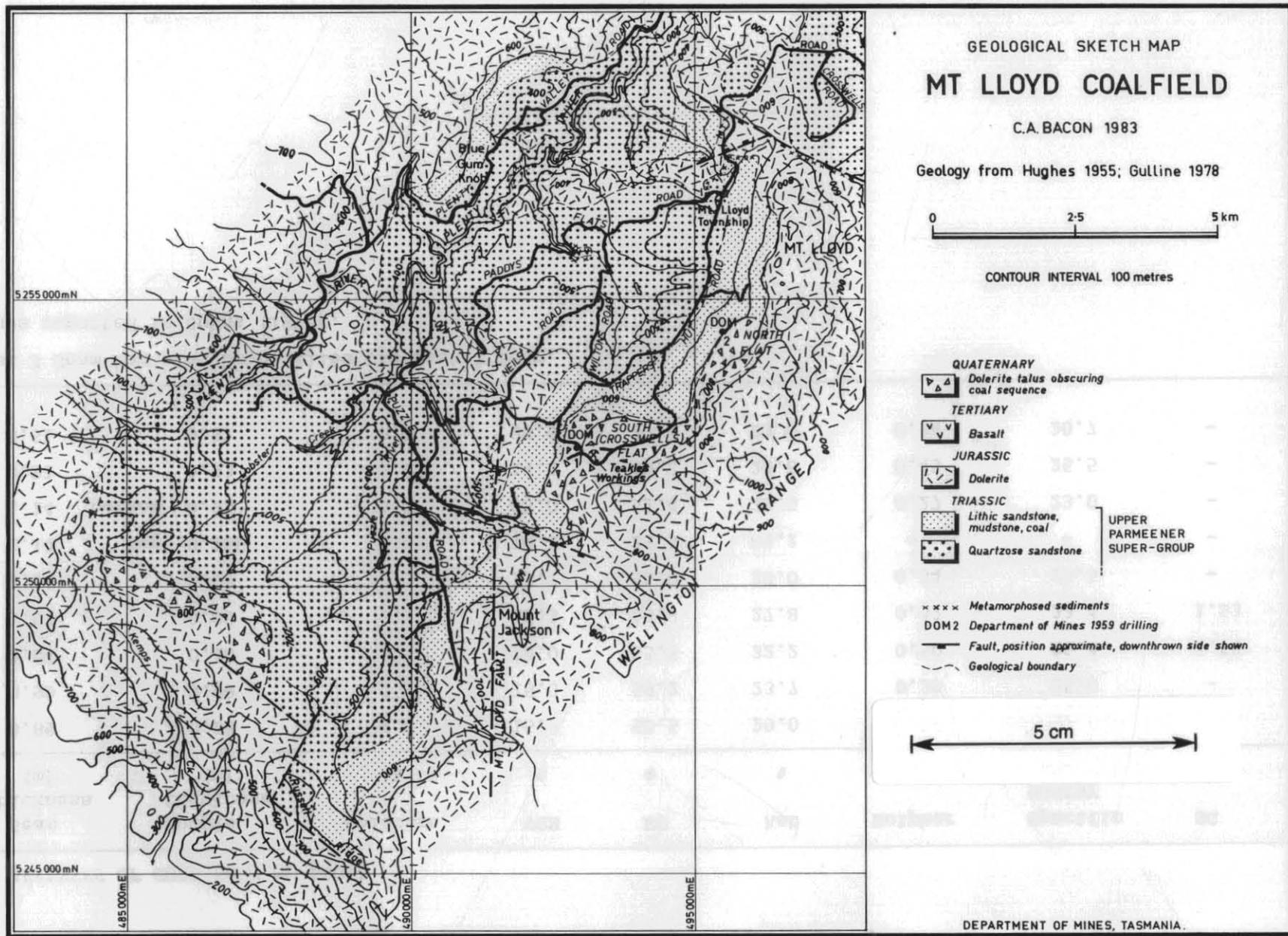


Figure 1.

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