

TR5-20-25

GOLD PROSPECTING NEAR FINGAL— NORTH-EAST TASMANIA

by J. Baird.

ABSTRACT

A survey north of Fingal township was made during November and early December, 1959, to encourage gold prospecting, and to suggest possible drilling targets. Only the old mines in the valley of Little Hospital Creek are regarded as suitable for drilling.

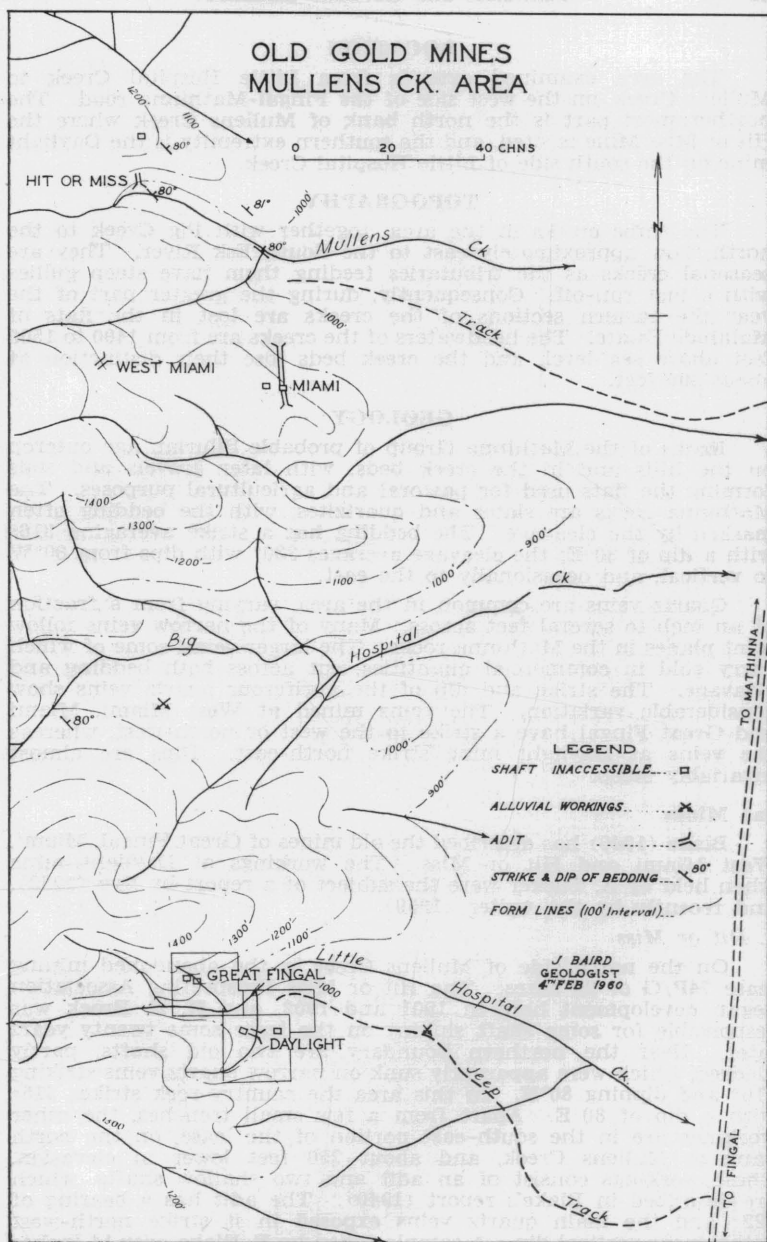


FIGURE 4.

5 cm

LOCATION

The area examined extends from Little Hospital Creek to Mullens Creek, on the west side of the Fingal-Mathinna road. The northernmost part is the north bank of Mullens Creek where the Hit or Miss Mine is sited, and the southern extremity is the Daylight mine on the south side of Little Hospital Creek.

TOPOGRAPHY

The three creeks in the area, together with Pig Creek to the north, flow approximately east to the South Esk River. They are seasonal creeks as the tributaries feeding them have steep gullies with a fast run-off. Consequently, during the greater part of the year the eastern sections of the creeks are lost in the flats of Malahide Estate. The headwaters of the creeks are from 1400 to 1500 feet above sea level, and the creek beds lose their distinction at about 900 feet.

GEOLOGY

Rocks of the Mathinna Group of probable Silurian age outcrop on the hills and in the creek beds, with later gravels and soils forming the flats used for pastoral and agricultural purposes. The Mathinna rocks are slates and quartzites, with the bedding often masked by the cleavage. The bedding has a strike averaging 316° with a dip of 80°E ; the cleavage averages 330° with dips from 80°W to vertical, and occasionally to the east.

Quartz veins are common in the area, varying from a fraction of an inch to several feet across. Many of the narrow veins follow joint planes in the Mathinna rocks. The larger veins, some of which carry gold in commercial quantities, cut across both bedding and cleavage. The strike and dip of the auriferous quartz veins show considerable variation. The veins mined at West Miami, Miami and Great Fingal have a strike to the west or north-west, whereas the veins at Daylight mine strike north-east. Dips are almost invariably steep.

(a) Mines

Blake (1940) has described the old mines of Great Fingal, Miami, West Miami and Hit or Miss. The workings at Daylight mine when held by A. Tucker were the subject of a report by Nye (1933), and recently by the writer (1959).

1. Hit or Miss

On the north side of Mullens Creek is the abandoned mining lease 74P/G of 20 acres. The Hit or Miss Prospecting Association began development here in 1901 and 1902, and H. E. Brock was responsible for some shaft sinking on the lease some twenty years later. Near the northern boundary are two old shafts, partly blocked, which were apparently sunk on narrow quartz veins striking 210° and dipping 80°N . In this area the country rock strikes 315° with a dip of 80°E . Apart from a few small trenches, the other workings are in the south-east portion of the lease, on the north bank of Mullens Creek, and about 250 feet lower in elevation. These workings consist of an adit and two shallow shafts, which are described in Blake's report (1940). The adit has a bearing of 322° and the main quartz veins exposed in it strike north-west with a near vertical dip. A sample taken by F. Blake over 14 inches of one branch vein showed only traces of gold and silver.

There is no record of any high assays from quartz from this prospect.

2. *Miami*

Most of the development on this mine was done between 1898 and 1902 by the Salmon Gold Syndicate of Tasmania, who held two ten acre leases, 146G and 147G, and a five acre lease 1029/93G, all of which were previously held by other parties. The workings consist of a 400 foot shaft from the top of the hill, about half a mile south of Mullens Creek two adits, the north adit at an elevation of 200 feet below the collar of the shaft, and the south adit 70 feet below the collar elevation; lateral developments on both the adit levels and on the 300 and 400 foot levels; and stopes above the adit levels. Only the south adit is accessible at the present time. It is on a bearing of 348° and the north adit bears 183°. The north adit is blocked at the portal and several feet of water are dammed in the tunnel.

The strike of the main quartz vein is 278° with a dip of 75° to 80°S. On surface it varies in width from 18 to 30 inches. In Blake's 1940 report on this mine he notes that the quartz was recorded as payable down to 200 feet, was poor at 300 feet, and at 400 feet contained little or no free gold. The Miami mine appears to be one of the few mines in the area which has been thoroughly tested at depth.

In addition to the main workings there is a small shaft reputed to be 60 feet deep, known as Brock's shaft. It is about five chains WNW of the main shaft and was sunk on a 12 to 15 inch quartz vein striking 272°. Hudson's sampling in 1940 did not disclose any high values in the exposed vein.

3. *West Miami*

This mine is half a mile west of Miami, on leases 1229/93G and 1239/93G, near a north-east trending tributary of Mullens Creek. It was developed between 1900 and 1902, the workings consisting of an adit, a shaft 165 feet deep, and lateral development on both the adit and 150 feet levels.

Only the adit level is now accessible, and some mining was carried out from this level in 1940 and 1941. The last recorded crushing was 27 tons for 7.3 ozs. gold in 1941. This was apparently mined after the last sampling by Hudson, which disclosed good values in a vein in the footwall of the north-west drive on Gearing's lode.

Near the mine the cleavage strikes at 321° and dips at 78°W. Bedding is clearly shown at the portal of the adit; strike is 345° and dip is 40°E. The main auriferous quartz lodes are two parallel north-west trending sets of veinlets, with steep dips to the south-west. The most southerly of these two has been referred to as Gearing's lode.

Because of the abandonment of the 150 feet level at West Miami, surface diamond drilling of these lodes for possible continuation of gold values is not suggested.

4. *Great Fingal*

The mine now known as the Great Fingal was worked by the Fingal Reefs Prospecting Association in 1901 and 1902. It is situated on the north bank of Little Hospital Creek on lease 16M/39, last worked by J. French and E. L. Clapp in 1939 and 1940.

The workings consist of two 30 feet vertical shafts 125 feet apart, with development to the north-west from No. 1 shaft (the more north-westerly shaft); stoping over a length of 90 feet; and a small open cut in the side of the gully leading to Little Hospital Creek. Unlike other prospects in the area, there have been no adits driven into the lode from the side of the hill.

The richest part of the workings is reputed to have been a four inch to six inch vein striking east from No. 1 Shaft. This vein was stoped to 23 feet below surface for a return of 32 ozs. gold from five tons of mineralised quartz.

The main lode has a north-west strike. Where examined by Hudson (1940) on the 30 foot level in No. 1 Shaft, the lode was 10 feet wide, and at 55 feet north-east of the shaft on the same level, 20 feet of formation was sampled, including four feet of mullock. None of Hudson's samples showed appreciable gold values.

Despite this lack of values on the 30 foot level, this lode is suggested for diamond drilling. There is proof of high values in one narrow vein on the lease, very close to the wide quartz vein explored on surface and at 30 feet. It is possible that other stringers of auriferous quartz exist, and also that the weakly-mineralised main lode is of commercial grade at depth.

Two drill holes are suggested south of the shafts on the side of the hill sloping down to Little Hospital Creek. Drilled at 45° on a bearing of 015° for a distance of 100 feet each, these holes should give an indication of the vein size at a depth of about 100 feet below the surface outcrop of the veins. The first hole could be collared 80 feet due south of No. 1 Shaft, and the second 150 feet from the first on a bearing of 105°. Surface exposures suggest the main vein branches to the east of No. 2 Shaft where the second hole is planned.

Because of the erratic gold values in the veins in this area, the results of two drill holes cannot be regarded as more than a rough indication of the value of the veins at depth, but should be a guide as to the advisability of sinking a new shaft, or of driving an adit into the hill. Neither of the old shafts is in workable condition, for though the walls are standing well, the shafts are blocked with old timber and debris.

5. Daylight

This mine is situated on the south side of Little Hospital Creek on lease 39M/48, held by F. H. Graham and T. L. Bean. A 60 foot shaft was sunk from the top of a small hill by the Daylight Gold Mining Company in 1917, and some lateral development was done. Shortly afterwards an adit was driven from the south side on a bearing of 300° and connection was made with the shaft. About 1933 when A. Tucker and T. E. Bantick held the lease, a battery was established and some stoping was done above the adit level, but until the present lessees took over, no prospecting had been done below the adit level.

The most recent development is a winze 18 feet deep, sunk from the adit level on a narrow vein striking north-east with an average dip of 80° S.E. There are several quartz veins and stringers in the bottom of the winze, most of which carry appreciable gold. The most important vein is nine inches wide and has assayed over 2½ ozs. gold/ton on the last two samples. As the holders of the

lease have worthwhile values on which to develop, diamond drilling of these veins is not suggested, though consideration might be given to drilling on the lease as present values diminish appreciably.

On the hill to the south and south-east of the Daylight mine are various trenches and shallow shafts and one vertical shaft reputed to be 90 feet deep. None of these prospects have been recorded as showing good gold values. The slates on this hill have well developed cleavage at 343° dipping 70° W.

(b) Remaining Area

The portion of the area away from the old mines includes the valley of Big Hospital Creek, between Little Hospital Creek and Mullens Creek. Outcrops of slates and quartzites are prominent in Big Hospital Creek and its tributary Day Dawn Creek. Cleavage varies from 337° to 321° with dips from 80° W to 80° E. Bedding strikes average 318° and dips are fairly constant at 80° E. Narrow quartz veins are common, particularly along joint planes. Some prospecting has been carried out in this valley, and potholing for alluvial gold has been conducted on the timbered flat south of Big Hospital Creek. Five of these potholes are at least 30 feet deep, and are spaced over a distance of 100 yards.

The most successful alluvial workings in the area were on lease 11172M on the south side of Little Hospital Creek about half a mile east of the Daylight mine. There is no complete record of the gold recovered from this lease, but verbal reports from old miners living in Fingal suggest that the patch was quite rich.

RECOMMENDATIONS

As the country inspected has been prospected intermittently over the past 100 years, it is unlikely that there are any outcropping auriferous quartz veins which have not been tested. Even weakly-mineralised veins have been trenched and sampled by the prospectors, so the best chance of another gold strike in the area is on a concealed vein.

The most likely location for another auriferous vein is near a proved gold mine. Of the mines which have produced gold, Great Fingal appears to have the highest potential as it has not been tested below 30 feet. A wide quartz formation is present, and what appears to have been a branch from it was mined for a return of better than six ozs. to the ton.

Therefore the initial drilling proposed is two holes of about 100 feet each, to test the Great Fingal lode at a depth of 100 feet below outcrop.

REFERENCES

- BAIRD, J., 1959.—Recent Development at Daylight Gold Mine. *Tas. Dept. Mines Rep.* (unpublished).
 BLAKE, F., 1940.—Great Fingal Workings—Fingal District. *Tas. Dept. Mines Rep.* (unpublished).
 ———, 1940.—Miami and West Miami Mines—Fingal District. *Tas. Dept. Mines Rep.* (unpublished).
 FINUCANE, K. J., AND NYE, P. B., 1935.—Mathinna and Tower Hill Goldfields. *Tas. Dept. Mines Geol. Surv. Bull.* No. 43.
 HUDSON, J. O., 1940.—Supplementary Sampling of the Great Fingal Gold Mine, Fingal. *Tas. Dept. Mines Rep.* (unpublished).
 ———, 1940.—Supplementary Report on Miami and West Miami Mines. *Tas. Dept. Mines Rep.* (unpublished).
 NYE, P. B., 1933.—Mining Operations carried on by A. Tucker near Fingal. *Tas. Dept. Mines Rep.* (unpublished).