

699 OPAQUE REPORT ON ALLUVIAL GOLD DEPOSITS IN
BRANDY CREEK, BEACONSFIELD, AND ON
THE PROPOSAL TO BRING IN A WATER
SUPPLY TO BRANDY CREEK FROM ANDERSON'S CREEK

Alluvial Gold Deposits

The alluvial gold deposits are restricted more or less to the valley of Brandy Creek. Near the head of the creek they are confined to a narrow tract in the bottom of the valley, but north of the York Town road where the surface is more or less flat, the deposits are more widely spread. Several leases exist along Brandy Creek, and for a considerable distance the old tramway reserve (Douglas & Evans, Purs.) embraces the deposits.

1698/G, H.J. Windred.

This lease probably includes a small portion of the gold-bearing gravels at the head of Brandy Creek, but no work is being performed on it.

188P/M, F.A. Cowie

This lease of 5 acres includes a length of 27 chains of the old tramway reserve. The bed of Brandy Creek and the gold-bearing gravels occur near the western boundary. Mr. Cowie has been working about the centre of this lease and immediately below the Little Wonder dam. Very little could be seen of the bottom wash as the recent workings were filled with water, while Mr. Cowie was installing a puddling machine. The deposits as far as visible show the following section:

	Soil
	3' Grit
1' to	2' Angular wash
2' to	3' Clay
Up to	2' 6" Wash

The full depth of bottom wash was not visible, nor was the bedrock exposed. Two prospects from the upper portion of the bottom wash yielded 2 and 10 fine colours of gold respectively. It is stated that the upper sand and grit yielded on assay a content of 1 dwt. per ton.

Mr. Cowie intends to start working and continue upstream until the bedrock is reached. All the material will be treated and a width of half a chain worked. The clay is rather a disadvantage and has to be puddled. If the proposed work is successful, Mr. Cowie will then shift his plant and commence at the lower end of lease 188P/M.

10940/M F.A. Cowie

50 acres. This lease embraces the underground workings of the old North Tasmania mine, but the alluvial deposits occur along the tramway reserve, which is included in this lease. At present the only work being performed is by Barrett, Manion and party some 2 chains north of the south boundary. They are opening up a face and boxing the material; but have not yet exposed the bedrock. The visible section consists of:

3' - 4'	Soil, grit, &c.
6' - 8'	Coarse, Angular wash.
	Wash, the full thickness of which is not proved.

A dish prospect from the top of the wash gave 6 colours of gold, while a shovelful of deeper wash yielded 8 medium colours, and another yielded 20 medium sized colours.

About the centre of the tramway reserve through this lease, Mr. Cowie recently worked an area of ground by hydraulic sluicing, electric power being used to drive the pump to supply nozzle water. The bedrock of slates and sandstones is exposed near the head of these workings. The workings were 1 to 2 chains wide and apparently about 6 feet deep.

To the north there are many signs of recent workings on a small scale as well as older ones. On the eastern bank, Kalb has recently been mining the bottom wash and then treating it by boxing or cradling. The older work also consisted of mining the bottom wash and then treating it. The centre of the creek also appears to have been worked by guttering.

Purchased land, G. Page, 5 ac.

Messrs. J.W. Murray, Steer and Murray, hold a permit to enter this private block. They also stated that they had made arrangements with the owners of the tramway reserve through this block as well as the land to the north, but there is no record in the Mines Department of same.

The prospectors have sunk 5 holes on this block and tramway through it. The holes all contained water and so could not be examined. One near the south boundary was 7 feet deep, and was stated to contain 2 feet of wash below 5 feet of sandy material the bottom being sandstone. Near the north boundary the holes were 10 feet deep and bottomed on clay. The upper part of the ground is a fine gritty material sometimes with a little clay. A dish prospect from the bottom wash (off the dump) from one gave 5 medium and 10 to 12 fine colours of gold from half a dishful. A dish prospect of the upper material gave a similar result from a full dish.

Application for 10 acre lease (11174/M), J.W. Murray.

This application is for a 10 acre lease north and adjoining the above block of G. Page. The York Town road divides it diagonally and the valley of Brandy Creek opens out into a flat to the north of the road. The bottom on the northern part of this lease is clay

while on the southern part it is a gravel composed of slate and sandstone pebbles. It would be advisable to test the ground to the true bedrock in order to ascertain if any gold bearing wash exists below the above false bottoms. At least 10 holes have been sunk on this 10 acres, 5 or 6 being in a N-S line along the eastern boundary. A prospect from the dump of one hole showed 5 medium colours and one fine one. The richest ground is stated to be south of the road, and the prospects from the dump verify this statement.

Prospecting Claim

Messrs, Murray and Steer hold a prospecting claim on the Crown land east of the old tramway and north of the York Town road. It has not been prospected to any extent but a tailrace is now being cut through it from the western boundary of A.R. Stonehouse's 5 acre block. The race is 4'6" to 5' deep and exposes:

1 foot	tailings
1' - 1'6"	soil
2'	sandy clay with pebbles
1' - 2'	wash, the full depth of which

is not exposed and which rests on a clay bottom. It is stated that the gravels along two chains of this race are gold bearing. A dish prospect from the top of the wash yielded 1 medium and 3 fine colours and one from the bottom yielded 2 medium and 2 fine colours of gold.

Detrital Gold Deposits.

Detrital desoposits exist on the lease of 11081/M of 50 acres held by F.G. Clay and S.M. Barry, some 30 chains west of Brandy Creek. The deposits occur in the south-eastern portion near the head of a small gully. The bedrock consists of sandstones, fine grits and conglomerates. The sandstones contain a number of short and narrow (up to 1") quartz veins carrying gold. The sand and detritus shed from these carry gold, which is being worked by the lessees, the detritus being carted to Brandy Creek and treated there as no water is available on the spot.

The ground along that part of Brandy Creek described above is gold-bearing and from the prospects seen, it is probable that it could be profitably treated. The upper portion (in the leases of F.A. Cowie) is confined to the valley of Brandy Creek and it may be possible to treat it by boxing, though it would be preferable (except where the clay might interfere) to treat it by hydraulic sluicing.

The lower portion on Messrs. Murray and Steer's leases &c. is more wide spread and would require to be treated by hydraulic sluicing although portions of it might be boxed.

At present, F.A. Cowie is using water from the Little Wonder Dam and would not require any from the proposed race. Messrs. Clay and Barry would require only a limited amount (say 1 sluice head) to enable the ground to be treated on the spot. Messrs.

Murray and Steer state that they require 5 sluice heads.

If the proposed race were to be brought in solely for mining purposes, it would be necessary to conduct a systematic testing campaign (by bore holes or shafts) on Messrs. Murray and Steer's leases to determine the area, depth and value of the ground in order to ensure that the quantity and value of the ground would be sufficient to warrant the expenditure on cleaning out and repairing the race.

However, in view of the fact that the Beaconsfield Council are likely to take over the race when the alluvial ground is worked out and arrange a supply for the township of Beaconsfield and the port of Beauty Point, the above testing campaign could be waived as the water would be extremely useful for that purpose even if no mining was attempted with it.

The Race

The race is shown on the attached plan. It was necessary to show it in relation to the purchased land &c. and considerable difficulty was experienced in so doing, owing to the fact that the surveys of many of the purchased blocks are old and it is extremely difficult to compile an accurate plan of same. However the course of the race is approximately correct and indicates correctly the purchased blocks through which it passes.

The intake is on Ancerson's Creek in the 320 acre land block in the name of Adye Douglas and the race traverses this block for 26 chains approximately.

It then passes through Crown land until the 50 acre block in the name of D. McIntosh (now held by the Agricultural Bank) is reached. About $6\frac{1}{2}$ chains of the race is in this block and it then enters the block of D. Munro, 50 acres, and passes through it for 14 chains. Crown land is passed through until the south boundary of Lot 729 is reached and the race then traverses this lot for 94 chains and the adjoining block (Lot 730) for $74\frac{1}{2}$ chains. Crown land is traversed until the race enters the old tramway at the saddle at the head of Brandy Creek. It follows it for 38 chains and then passes through Crown land after which the private land of O'Toole and the Hospital reserve are traversed.

The total length of the race to the saddle at the head of Brandy Creek is 5 miles 27.11 chains and to the western boundary of O'Toole is 6 miles 70.26 chains.

The race is generally in fair order and for the most part only requires logs removing, scrub cleared, the silt &c. dug out of the bottom and the sides trimmed and given a batter. At a few places the race wall has been washed away or otherwise destroyed and in some of these fluming will be necessary. Culverts have to be made under two or three roads and creek crossings made at two places.

The intake appears to have been at a place where the creek bed is 40 to 50 links wide and a diversion

well or weir would have to be constructed. By extending the race upstream for about 1½ chains a better intake would be obtained though some rock excavations would probably be necessary.

From the intake, the first 90 chains are on the western fall of a steep hill and through country composed of quartz schists, quartzites slates &c. Owing to the steep slope, the race has been excavated narrower (2' to 2'6") and deeper than usual.

The race wall has been destroyed in 3 places, necessitating fluming of 25 feet, 26 feet, and 26 feet respectively.

From the point where the race trends easterly from Anderson's Creek it traverses serpentine country. As a general rule there was little soil along this length and rock excavation was necessary and advantage was taken of all joints &c. for easy working. As a result the race is of irregular width and depth, the width at the top being usually about 2'6". One creek crossing will be needed either by fluming or building of a wall. The race is broken away in 4 places and necessitating fluming of 5 feet, 10 ft., and 5 feet and 10 feet respectively.

From the N.E. corner of D. Munro 50 acres, the race has been cut in Permo-Carboniferous mudstones to a point 23 chains beyond the road into Anderson's Creek. It is more uniform in width in this section being 2'6" to 3' wide at top. A creek will need 40 feet of fluming and a culvert will need to be made under the Anderson's Creek road.

Through the remainder of Lot 729 and almost to the north boundary of Lot 730, the race is through serpentine country. The hill slopes are moderate and the race is more regular in dimensions being 2'6" to 3' wide at the top. Towards the north of Lot 729, the race passes through a saddle partly by deep cutting and partly by tunnel in serpentine rock. It is difficult to ascertain the true state of the race here but considerable attention would be needed. Beyond the tunnel the race formerly ran down a swamp before being picked up again by a race, but it would be advisable to excavate a race along this part (a distance of 1330 feet).

Approaching the north line of Lot 730 the race enters sandstone country with no rock and then through the Crown land it traverses gravels and deeply soiled country. The race is wider (up to 3'6") and is more uniform. The culvert under the Holwell road cannot be seen now and probably requires re-making.

Along the old tramway the race was in detritus on a slope which becomes steeper to the north, and with the road cutting below caused 1200 feet to be flumed, all of which would have to be restored.

If the water is delivered to the saddle at the head of Brandy Creek, and the users take the water along the west side of the creek, a culvert would have to be made under the road, and the users would have to cut a new race on the west side. This scheme would be much cheaper than extending the race to O'Toole's land, which would necessitate 18 chains of fluming.

Approximate Estimate of Cost

The length of the race to the head of Brandy Creek is 6 miles 27.11 chains. Along this length there would be 132 feet of fluming, 380 feet to be redug, 2 culverts under the roads, to be made. 1400 feet would have to be dug (1330 being down the tributary of Limestone Creek and 70 probable deviation around a tree) About 130 logs of various sizes would need to be removed and 30 chains of scrub cut. The rock portions amount to 63 chains in all.

This would require an estimated expenditure of 480 chains of race to be cleaned out, sides trimmed, scrub out, logs removed &c.

at 5/- per chain	£120
2 chains fluming @ £25 per chain	50
1½ chains culvert	10
6 chains to be redug or remade	4
21.5 " new race	20
Diversion weir at intake	15
	£219

If the race were continued to O'Toole's private land a further 24 chains would need cleaning out, 1 chain redug and 18 chains of fluming constructed for most of which the earth formation is intact.

The race has apparently been constructed to dimensions approximately as follows:-
width at top 2'6", width at bottom 1'8" and depth 1'6", and could be cleaned out to such dimensions.

Only one part of the race has been levelled viz. that from the intake to the 90 chain peg and this proves the grade to be very variable. The lowest grade is between the 60 and 90 chain pegs where the fall is 1.97 feet, or 0.788 inches per chain. The lowest grade will regulate the amount of water which will pass through the race and assuming the above as the minimum grade, the race should carry 7.7 sluice heads.

It is impossible to determine the amount of water available in Anderson's Creek in the dry months of the summer. A test during the survey indicated a flow of 10 s.h. but this would probably be decreased in the dry months. It is obvious therefore that the race if made of the above dimensions would carry all the available water in Anderson's Creek during the dry months.

The known demand for mining purposes at Brandy Creek is 5 s.h. for Messrs. Murray and Steer and 1 s.h. for Messrs. Clay and Barry. This demand would be just large enough to consume all water available in Anderson's Creek in the dry months and which would be delivered by the race.

As far as could be ascertained the diversion of the water would not affect any landholders downstream from the intake. Further the flow at the road over Anderson's creek appeared to be double that at the intake and so a considerable amount of water must enter the creek below the intake.

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