UR 1947/34-35

21st October, 1947.

MEMORANDUM

Limestone in the Huon and Channel Districts.

With the hope of obtaining limestone of sufficient grade and quantity for use on agricultural properties in the Huon Area, I have just completed a general reconnaissance of the Huon and Channel Districts. In addition to a personal examination of various rock types, I have interviewed Forestry officers, local residents etc., but the results have been almost entirely negative. Beyond a small deposit of limestone near Margate and a few narrow calcareous bands in some mudstones, there does not appear to be any deposits closer to the agricultural areas than those at Lune River.

The rock types of the Huon District are not generally suitable for the occurrence of limestone. Dolerite occupies a large portion of the area, sandstones of Triassic and Permian age are next in extent and the mudstones that do occur do not seem to belong to that stage of the Permian with which limestone beds are associated. Lower Palaeozoic sediments containing some narrow limestone beds occur well to the west of the settled areas, in the vicinity of where the Craycroft River empties into the Huon River.

The deposit at Margate may be worthy of mention and further work may reveal deposits of sufficient extent for local requirements. It is situated near the top of a small, partially cleared hill, one mile south of Margate Hall on property owned by W.C. White. On the land chart the leases covering the area are 40.0.0. T.S. Hart and 15.0.0. C.S. Hart.

No real outcrops of limestone occur, but on the hillside may be seen scattered boulders up to 2 feet in diameter, and the position of these, together with the soil types gives some indication of the extent of the limestone. Well defined mudstone beds may be seen below the limestone. These dip gently (2-3°) to the south-east and contain the typical Permian array of marine fossils. On the top of the hill, boulders of fossiliferous mudstone indicate that the limestone forms a narrow bed in the more extensive mudstones.

Lithologically the limestone is very similar to that being worked at Granton quarries and samples have been forwarded to the Chief Chemist for analysis. Any attempt at estimating quantities at the present time would be very approximate but the thickness of the beds would probably not exceed 35 feet and to the south, where the hill drops away, would be about 10 feet. An overburden of up to 25 feet of mudstone may be expected near the top of the hill. The deposit would be approximately 1,200 feet in length by 300 feet in width with an average thickness of 20 feet. If these figures are approximately correct, and, of course, there is no definite evidence that they are, then the deposit would contain about half a million tons.

The limestone boulders that can be seen are free from mudstone or shaly bands but these would be weathered away and it is reasonable to suppose that, as at Granton, limestone beds of 1 to 3 feet in thickness are separated by shaly bands up to a few inches in thickness. It must be remembered, too, that an overburden up to 25 feet thick covers the limestone at its thickest point. Access is available by cart road right to the deposit. A motor road from Margate leads to within a few hundred feet of the area.

The only other limestone sampled, occurs in creek beds, a few hundred feet north and west of the Cascade Brewery. The Hobart Rivulet has eroded the mudstones which outcrop abundantly in the vicinity, sufficiently to expose about six feet of blue limestones over a length of at least fifty feet. The beds are striking at 40° and have a dip to the south-east of 8°. Two samples were taken, the upper over 3'6" and the lower over 2'6". Limestones are also exposed in the bed of the tributary which joins the Hobart Rivulet from the north, just below the Brewery. The creek fall follows the dip of the beds so they are exposed for several hundred feet. No great thickness is exposed and the lime content seems to diminish to the north.

These deposits, on account of the small thickness exposed, and the immense thickness of overburden, are not of economic interest.

Sgd. Terence D. Hughes.
GEOLOGIST

The Director of Mines,
HOBART

ANALYSES

	Reg. No.	$CaCO_3$	CaO	MgO	Insol.	Fe_2O_3 Al_2O_3	H_2O	Ig. Loss
MARGATE (HARTS HILL)	639/47	72.41	40.55	.39	23.68	1.76	0.3	32.38
	640/47	81.69	45.75	.40	15.44	0.92	0.18	36.72
	641/47	78.83	44.15	.39	17.60	0.96	0.10	35.87
	642/47	79.73	44.65	.43	13.44	0.84	0.4	37.80
CASCADE BREWERY W. of	643/47	70.80	39.65	.32	25.76	1.2	.14	32.0
	644/47	14.01	7.85	1.0	76.52	4.68	.56	8.32
	645/47	39.37	22.05	.48	55.0	3.04	.20	18.08