

1980/28. Further investigation of sand resources at 'Native Point', Perth

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Abstract

An auger drilling programme undertaken at 'Native Point', Perth, showed the estimated reserve of sand containing <5% fines to be 80 000 m³, to a depth of one metre. A further 80 000 m³ would be present if the limit was 10% fines. The total requirements of the Launceston area are adequately satisfied, with about 40 years reserve. It is considered that the 'Native Point' sand is not an economic deposit.

INTRODUCTION

In order to clarify differences in sand reserve estimates on the property 'Native Point' [EP165975], acquired by the Forestry Commission, additional work to that previously carried out (Threader, 1979) has been undertaken. The results are included in this report.

The former property owner, E.S. Gibson of 'Native Point', is claiming compensation for an estimated 600 000 m³ of recoverable and marketable sand on this property. The basis of the estimate is a drilling programme carried out by H. Stacpoole. Unfortunately there is no borehole location plan and no evidence of sizing analysis of samples obtained from this programme, and the work cannot therefore form the basis of a reliable reserve estimate.

An auger drilling programme has recently been carried out by the Department of Mines. The results are given in Table 1 and Figure 1. In column 4 of Table 1 the content of material finer than 75 µm, the silt and clay fraction, is listed. Sand containing more than 5% of 'fines' does not find a ready market. Column 5 gives thickness of sand containing less than 5% 'fines'.

The sand reserve shown on Figure 1 contains 80 000 m³ to a depth of one metre. An additional reserve of 80 000 m³ would be present if the limit was set at 10% 'fines'.

THE SAND INDUSTRY IN LAUNCESTON

Coarse grained quartz sand is obtained from areas outside Launceston (Beauty Point and Scottsdale) for use in ready-mixed concrete and cement blocks and tiles. The principal source of fine aggregate in the concrete and cement block industry is obtained as a by product of rock crushing.

Fine sand from Hadspen, Carrick and Perth (commonly referred to as 'rabbit sand' in the industry) is used as an admixture with quartz sand in cement tile manufacture. It is also used as a bedding sand for pipe laying and concrete slabs. This sand contains less than 5% 'fines'. Other uses are as a 'fat sand' by bricklayers and as an additive in clay brick manufacture. These latter two users would tolerate a slightly higher clay fraction.

The total requirements at present are 50 000 m³ per annum and are satisfied by areas containing around 2 x 10⁶ m³ or about 40 years reserve.

The 'Native Point' deposit has been downgraded by this additional

work and it is not considered an economic deposit. There would be wastage of surface material due to soil and root contamination and also at the base of the deposit where it rests on clayey material. A deposit of less than one metre thickness would probably not be worth mining.

REFERENCE

THREADER, V.M. 1979. Sand resources at 'Native Point', Perth. *Unpubl. Rep. Dep. Mines Tasm.* 1979/6.

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Table 1. RESULTS OF AUGER DRILLING PROGRAMME, PERTH

Hole	Depth (m)	Thickness (m)	<75 μ m (%)	Sand thickness (m)
1	0-0.8	0.8	8.2	0
	0.8-1.5	0.7	4.8	
2	0-0.8	0.8	4.0	0.8
3	0-0.8	0.8	2.8	1.3
	0.8-1.3	0.5	1.6	
4	0-0.8	0.8	3.8	1.5
	0.8-1.5	0.7	3.0	
5	0-0.9	0.9	10.6	0
	0.9-1.4	0.5	44.7	
6	0-0.3	0.3	27.8	0
7	0-0.9	0.9	8.4	0
8	0-0.8	0.8	7.7	2
	0.8-1.5	0.7	4.0	
	1.5-2.3	0.8	4.1	
	2.3-3.0	0.7	9.9	
	3.0-3.7	0.7	11.5	
9	0-0.8	0.8	4.2	1.5
	0.8-1.5	0.7	1.9	
	1.5-2.3	0.8	9.9	
	2.3-3.0	0.7	6.8	
	3.0-3.8	0.8	24.2	
10	0-0.8	0.8	2.5	0.8
	0.8-1.5	0.7	22.2	
	1.5-2.3	0.8	12.6	
	2.3-3.0	0.7	9.9	
11	0-0.8	0.8	4.8	0.8
	0.8-1.5	0.7	8.8	
	1.5-2.3	0.8	4.7	
	2.3-3.0	0.7	8.9	
12	0-0.8	0.8	20.2	0
	0.8-1.5	0.7	10.2	
	1.5-2.3	0.8	10.9	
	2.3-3.0	0.7	6.9	
13	0-0.8	0.8	45.8	0
14	0-0.8	0.8	6.6	0
	0.8-1.5	0.7	5.5	
	1.5-2.1	0.6	36.8	
15	0-0.8	0.8	15.9	0
	0.8-0.9	0.1	44.4	
16	0-0.8	0.8	5.1	0.8
	0.8-1.1	0.3	24.0	
17	0-0.3	0.3	18.8	0

Table 1. (continued)

Hole	Depth (m)	Thickness (m)	<75 μm (%)	Sand thickness (m)
18	0-0.8	0.8	29.0	0
	0.8-1.2	1.2	30.7	
	1.2-1.8	0.6	30.8	
19	0-0.8	0.8	7.2	0
	0.8-1.5	0.7	6.6	
	1.5-2.3	0.8	9.6	
	2.3-2.7	0.4	18.0	
20	0-0.8	0.8	1.8	0.8
	0.8-1.5	0.7	6.5	
21	0-0.1	0.1	38.4	0
22	0-0.1	0.1	36.0	0
23	0-0.8	0.8	11.4	0
	0.8-1.0	0.2	35.2	
24	0-0.8	0.8	26.5	0
	0.8-1.5	0.7	9.3	
	1.5-2.3	0.8	17.4	
	2.3-2.7	0.4	30.7	
25	0-0.8	0.8	19.7	0
	0.8-1.5	0.7	16.5	
	1.5-2.3	0.8	7.3	
	2.3-2.7	0.4	27.4	
26	0-0.3	0.3	41.0	0
27	0-0.6	0.6	15.8	0

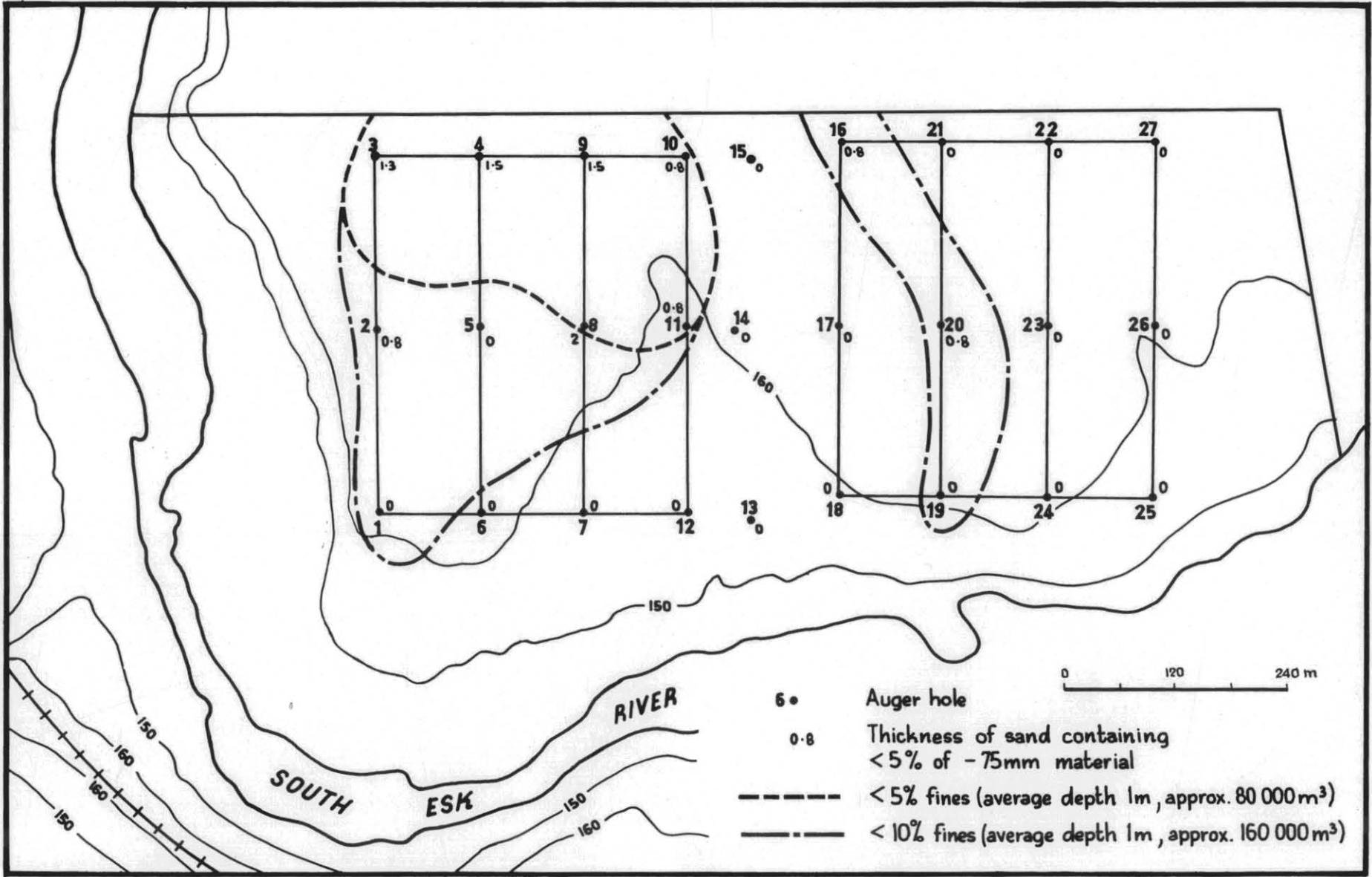


Figure 1. Location of auger holes, Native Point

