

LAUNCESTON, March 28th, 1945.

Duplicate

No 133.

EXAMINATION OF CONCENTRATES FROM  
BEACH SANDS FROM KING ISLAND AND PIPERS RIVER.

Samples Examined.

Reg. No. 114. Received during February 1945 from the Director of Mines stated to be a Table concentrate from Narracoopa, King Island.

Reg. No. 107 - No. 2. Received on the 7th of March, 1945, from the Director of Mines. The sample was labelled "Bore samples" and stated to be a sample of beach sands from Narracoopa, King Island. This sample was subjected to table concentration with the following results.

	<u>Weight Percent.</u>
Concentrate +60 mesh (mostly garnet)	0.4
Concentrate -60 +100 mesh	33.9
Concentrate -100 mesh	41.5
Middling (mostly garnet)	18.5
Tailing	5.7

The -60 +100 mesh and -100 mesh concentrates were further examined as shown later.

Reg. No's. 621-1 and 622-2/43. These samples are table concentrates produced in the laboratory from bore samples of beach sands from Pipers River. The results of concentration tests were reported on the 29.9.43.

Examination of the Concentrates. The concentrates were treated on a pilot "Rapid" magnetic separator to obtain information relating to the quality and quantity of products available by magnetic separation.

RESULTS.("Insoluble" refers to  $\text{KHSO}_4\text{-H}_2\text{SO}_4$  Insoluble)Reg. No. 114.

<u>Product No.</u>	<u>Weight</u>	<u>P e r c e n t</u>		
		<u>TiO<sub>2</sub></u>	<u>Cr<sub>2</sub>O<sub>3</sub></u>	<u>Insoluble</u>
Magnetic 1	0.27	33.0	-	0.56
" 2	7.99	46.5	1.9	2.44
" 3	0.13	48.0	-	1.84
" 4	67.59	40.5	2.3	22.2
" 4A	1.77	50.1	-	2.44
" 5	11.20	46.5	6.3	8.32
Non-Magnetic 6	11.05	39.0	-	53.05

Reg. No. 107/2 (-60 +100 mesh concentrate)

<u>Product</u>	<u>No.</u>	<u>Weight</u>	<u>P e r c e n t</u>		
			<u>TiO<sub>2</sub></u>	<u>Cr<sub>2</sub>O<sub>3</sub></u>	<u>Insoluble</u>
Magnetic	1	0.40	33.5	8.5	3.46
"	2	4.42	49.0	1.4	7.34
"	3	2.70	34.5	0.7	30.86
"	4	35.26	34.5	2.0	33.72
"	4A	14.90	44.0	4.0	13.78
"	4B	2.09	52.0	2.0	16.72
Non-Magnetic	5	40.23	44.5	Trace	49.5

Reg. No. 107/2 (-100 mesh concentrate)

<u>Product</u>	<u>No.</u>	<u>Weight</u>	<u>P e r c e n t</u>		
			<u>TiO<sub>2</sub></u>	<u>Cr<sub>2</sub>O<sub>3</sub></u>	<u>Insoluble</u>
Magnetic	1	1.14	39.0	2.7	1.26
"	2	4.07	47.5	0.9	1.46
"	3	2.25	49.0	0.6	0.94
"	4	25.85	47.5	3.4	10.66
"	4A	1.35	43.5	4.5	11.32
Non Magnetic	5	65.34	28.5	0.5	63.54

Reg. No. 621-1/43.

<u>Product.</u>	<u>No.</u>	<u>Weight</u>	<u>P e r c e n t</u>		
			<u>TiO<sub>2</sub></u>	<u>Cr<sub>2</sub>O<sub>3</sub></u>	<u>Insoluble</u>
Magnetic	1	8.52	46.8	0.6	0.38
"	2	22.17	50.5	0.3	1.14
"	3	24.58	52.0	0.3	1.36
"	4	13.74	10.4	11.0	51.4
"	4A	4.59	14.0	8.2	48.2
Non Magnetic	5	26.40	36.0	0.5	59.94

Reg. No. 622-2/43.

<u>Product</u>	<u>No.</u>	<u>Weight</u>	<u>P e r c e n t</u>		
			<u>TiO<sub>2</sub></u>	<u>Cr<sub>2</sub>O<sub>3</sub></u>	<u>Insoluble</u>
Magnetic	1	6.95	47.5	0.7	0.4
"	2	19.07	52.5	0.3	0.5
"	3	30.14	52.0	0.2	1.88
"	4	11.64	7.1	10.9	52.24
"	4A	0.93	9.9	12.0	42.38
Non-Magnetic	5	31.27	36.4	2.5	53.84

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