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BEACH SANDS INVESTIGATION.

THE BROADBEACH RECREATION AND CAMPING RESERVE.

by

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SOUTHPORT, QUEENSLAND.

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THE BROADBEACH RECREATION AND CAMPING RESERVE.

A plan and sections of the area are given at the back of this report (Plates 1 and 2). This report gives an estimate of the quantities of heavy minerals occurring in the Recreation Reserve and a strip 160 feet wide on the Eastern margin of the Reserve.

BORING AND SAMPLING.

Bores were put down to water level, using a post-hole digger. When the sand brought up from the boreholes appeared to contain appreciable quantities of heavy minerals it was sampled by quartering.

DETERMINATION OF SAMPLES.

Samples were dried, and their weights and volumes determined. The samples were then concentrated by Wilfley Table, and the weights and volumes of the dry concentrates were determined. The percentage composition of a composite sample of concentrates from each bore line was determined by grain counting.

RESULTS.

Estimates of the quantities and grades of heavy mineral concentrates, the quantities of overburden, and the quantities of each of the heavy minerals are tabulated in this report as follows :-

Table 1. Tonnage of Heavy Mineral Concentrate, Volumes and Average Thicknesses of Mineral-Bearing Sands and of Overburden, and Average Grades of Mineral-Bearing Sands.

Table 2. Tonnages of Each of the Heavy Minerals.

The figures of Tables 1 and 2 were derived from data tabulated in the Appendix as follows :-

Appendix.

Table A. Quantities of Heavy Minerals Intersected in Bores.

Table B. Weight of Mineral in 1 Yard Strip along Bore Line.

Table C. Volume and Average Thickness of Mineral-Bearing Sand along Bore Line.

Table D. Volume and Average Thickness of Overburden along Bore Line.

Table E. Average Weight of Heavy Mineral Concentrate per 1 Yard strip between Bore Lines, and average Area of Longitudinal Section of Mineral-Bearing Sands and of Overburden between Bore Lines.

Table F. Total Weight of Heavy Mineral Concentrate, Total Volume of Mineral-Bearing Sands, and Total Volume of Overburden between Bore Lines.

Table G. Average Thickness of Mineral-Bearing Sands and of Overburden.

An approximate estimate of the main quantity of mineral within the reserve may be obtained by estimating the quantity of mineral in Blocks A, B, and C, west of the adopted meridian (the eastern boundary of the reserve).

Thus, the total quantity of mineral in a 1 Yard strip along Line 564N. (from Table B) = 119,554.4 lbs.

Similarly for Line 244N, the total quantity = 166,458.27 lbs.

The average quantity of mineral per 1 Yard Strip in Blocks A + B + C may be represented approximately by the average of the above, viz. = 143,006.33(1)

The total quantity of mineral in a 1 Yard Strip on Line 564N east of the adopted meridian (Recreation Reserve boundary), from Table B = 36,788.4 lbs.

Similarly, for Line 244N east of the meridian, the total quantity of mineral = 34,312.6 lbs.

The average quantity of mineral per 1 Yard Strip in Blocks A, B and C, east of the adopted meridian may be represented by the average of the above, viz. 35,550.5 lbs.....(2)

From (1) and (2) the proportion of the total tonnage of blocks A, B and C which is west of the adopted meridian (i.e. within the reserve) =

$$\frac{107455.8}{143006.33}$$

The total tonnage in Blocks A, B and C (from Table 1) = 10,694.41.

Hence the tonnage in the Blocks within the reserve will be approximately 8036 tons.

Therefore the Total Tonnage of the Reserve will be approaching, but less than 9000 tons.

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BROADBEACH RECREATION RESERVE.

Method used in calculating tonnages, etc.

Figures in Tables 1, 3 and appendix tables E, F and G were derived from data tabulated in the appendix tables A, B, C and D as follows :-

Table E, i.e., the weight of mineral per 1 Yard Strip, the area of longitudinal section of mineral bearing sands and overburden and the average values along the bore lines.

In the area these values were assumed to change uniformly between the bore lines.

Along the base lines 1, 2, 3 and 4, shown on plan, the above values were calculated from 160E to 835W.
 " " " " 4 and 5, shown on plan, the above values were calculated from 160E to 770W.
 " " " " 1 and 2, shown on plan, the above values were calculated from 835W to 910W.
 " " " line 4, shown on plan, the above values were calculated from 770W to 835W.
 " " " " 5, shown on plan, the above values were calculated from 320W to 770W.

Table F. The average of these values were then used to calculate figures in Table F.

Mineral, etc., north of base line 5 (Block H) were assumed to be uniform throughout the area.

Table G. These figures were obtained from Table F. (Blocks A - H are those bounded by the base lines shown on the accompanying plan).

Table 1. Obtained from Tables F and G.

Table 3. The percentage composition was considered to be uniform over the whole area.

Tables 2 and appendix table H were omitted.

TABLE 1.

TONNAGES OF HEAVY MINERAL CONCENTRATE, VOLUMES AND AVERAGE THICKNESSES OF MINERAL-BEARING SANDS AND OF OVERBURDEN, AND AVERAGE GRADES OF MINERAL-BEARING SANDS.

AREA BETWEEN BORE LINES.	WEIGHT OF HEAVY MINERAL CONCEN- TRATE.	V O L U M E		A V E R A G E T H I C K N E S S				AVERAGE GRADE OF MIN- ERAL-BEARING SANDS. LBS. OF HEAVY MINERAL CONCENTRATE PER CUB YD
	(TABLE F.)	MINERAL-BEARING SANDS	OVER- BURDEN	MINERAL-BEARING SANDS	OVER- BURDEN			
	TONS	(TABLE F.) CUBIC YDS.	(TABLE F.) CUBIC YDS.	(TABLE G.) FEET INCHES	(TABLE G.) FEET INCHES			
Block A.	6153.63	15392.8	70924.8	1	8.8	8	0.1	895.4
Block B.	2810.37	8278.4	39352.3	1	8.5	8	2.2	760.4
Block C.	1730.41	5706.6	27628.8	1	8.5	8	3.7	679.2
Block D.	3127.50	12165.33	56460.66	1	8.8	8	2.2	575.8
Block E.	313.27	526.4	6729.6	0	9.3	10	0.9	1333.0
Block F.	129.06	239.8	3132.8	0	9.3	10	2.7	1205.5
Block G.	48.59	190.66	2768.33	0	2.8	3	9.7	570.8
Block H.	100.00	437.42	5844.57	0	5.0	5	9.1	512.0

TABLE 13/ 2.

TONNAGES OF EACH OF THE HEAVY MINERALS

ESTIMATED FROM PERCENTAGE COMPOSITIONS DETERMINED BY GRAIN COUNTING

[illegible]

APPENDIX. TAB. I A. PAGE 1.
Recreation Reserve.

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R.L.	CO-ORDINATES FROM S.E.CNR.CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
LINE 564 N. 160E. R.L. 6.1	564N/160E.	1	L5523	0'3"	1'0"	304.7	10.2	228.5	
		2	L5524	2'0"	3'0"	1083.0	32.5	1083.0	Overburden :
		Thickness of 2'9"				476.9		1311.5	0'3"
140E. 15.4	564N/140E.	1	L5525	9'6"	10'3"	3136.5	70.6	2352.4	
		2	L5526	10'3"	11'0"	588.1	20.9	441.1	
		3	L5527	12'0"	12'6"	629.2	21.1	314.6	Overburden :
		Thickness of 3'0"				1036.0		3108.1	9'6"
95E. 20.4	564N/95E.	1	L5528	12'0"	13'0"	734.1	23.8	734.1	
		2	L5529	14'0"	15'0"	2205.3	56.7	2205.3	
		3	L5530	15'3"	16'3"	621.8	20.5	621.8	Overburden :
		Thickness of 4'3"				837.9		3561.2	12'0"
70E. 18.33	564N/70E.	1	L5996	7'0"	7'9"	294.2	10.6	220.6	
		2	L5997	9'9"	10'6"	1438.0	39.9	1078.5	
		3	L5998	10'6"	11'0"	2626.0	62.4	1313.0	Overburden :
		Thickness of 4'0"				653.0		2612.1	7'0"

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R.L.	CO-ORDINATES FROM S.E.CNR. CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
45E. R.L. 17.73	564N/45E.			T R A C E S.					
15W. 22.53	564N/15W.	1	L5999	0'0"	16'0"	17.6	.6	-	} Overburden.
		2	L6000	16'0"	16'4"	104.0	30.7	34.6	
		3	L6001	18'6"	19'3"	996.0	32	747.0	
		4	L6002	19'3"	19'6"	1680.0	44.7	420.0	Overburden :
		Thickness of 3'6"				343.3		1201.6	16'0"
65W. 23.77	564N/65W.	1	L6003	1'9"	2'2"	18.5	.66	-	
		2	L6004	15'6"	15'8"	141	5.02	23.5	
		3	L6005	16'0"	16'9"	1412	39.7	1059.0	
		4	L6006	16'11"	17'11"	2465	56.2	2465.0	
		5	L6007	18'0"	18'6"	175.6	6.4	87.8	
		6	L6008	19'0"	19'3"	1327	38.4	331.7	
		7	L6009	19'3"	19'9"	2047	50.1	1023.5	
		8	L6010	20'0"	20'3"	1487	38.3	371.7	Overburden :
		Thickness of 4'9"				1128.8		5362.2	15'6"

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BORE NO. & R.L.	CO-ORDINATES FROM S.E.CNR.CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
205W. R. L. 17.4	564N/205W.	1	L5538	6'6"	8'0"	547.4	14.2	821.1	
		2	L5539	8'6"	9'0"	137.5	4.3	68.7	Overburden :
		3	L5540	10'6"	10'9"	548.9	18.7	137.2	0'0" to 6'6")
		Thickness of 2'9"			373.0		1027.0	9'0" to 10'6")	8'0"
285W. 17.4	564N/285W.	1	L5541	6'3"	6'5"	695.3	23.8	115.9	
		2	L5542	7'3"	8'0"	409.0	14.0	306.7	
		3	L5543	10'0"	10'8"	528.5	17.3	352.3	Overburden:-
		4	L5544	11'6"	12'1"	1559.7	44.6	909.8	0'0" to 6'3")
		Thickness of 3'10"			436.9		1684.7	8'0" to 10'0")	8'3"
345W. 15.49	564N/345W.	1	L6014	5'2"	5'3"	575.9	17.7	-	
		2	L6015	6'6"	7'1"	371.4	13.2	216.6	Overburden :
		3	L6016	9'0"	10'0"	580.6	19.7	580.6	0'0" to 6'6")
		Thickness of 1'7"			504.6		797.2	7'1" to 9'0")	8'5"

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R. L.	CO-ORDINATES FROM S.E.CNR.CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
385W. R. L. 17.6	564N/385W.	1	L5545	9'9"	10'0"	1019.4	31.5	254.8	
		2	L5546	11'0"	11'3"	522.0	17.4	130.5	Overburden :
		Thickness of 1'6"				256.8		385.3	9'9"
405W. 17.08	564N/405W.	1	L6018	10'10"	10'2"	761.9	24.6	126.9	Overburden :
		Thickness of 0'2"				761.9		126.9	10'0"
465W. 16.86	564N/465W.	1	L6017	11'0"	11'2"	106.9	6.2	17.8	Grade too low.
525W. 17.9	564N/525W.		T R A C E S.						
575W. 18.02	564N/575W.		NO SAMPLE.						
625W. 17.54	564N/625W.	1	L6020	3'3"	14'3"	T R A C E S.			
655W. 16.95	564N/655W.	1	L6019	13'5"	13'11"	809.8	26.2	404.9	Overburden :
		Thickness of 0'6"				809.8		404.9	13'5"
		1	L5548	10'0"	10'9"	389.4	13.4	292.0	Overburden : 10'0"
825W. 19.8	564N/825W.	1	L5549	13'2"	14'0"	683.8	21.8	569.8	Overburden : 13'2"

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

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QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R.L.	CO-ORDINATES FROM S.E.CNR.CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
LINE 244N. (Contd.) 10W. R.L. 21.6	244N/10W.	1	L5506	15'0"	15'6"	94.0	3.53	-	
		2	L5507	17'3"	18'9"	1336.5	40.0	2004.7	Overburden :
			Thickness	1'6"		1336.5		2004.7	17'3"
35W. 23.9	244N/35W.	1	L5508	18'0"	20'0"	3103.4	76.8	6206.8	Heavy Seam. Overburden :
			Thickness	2'0"		3103.4		6206.8	18'0"
75W. 16.1	244N/75W.	1	L5509	7'3"	8'0"	1028.1	32.6	771.1	
		2	L5510	9'6"	10'3"	2349.5	62.7	1762.1	
		3	L5511	12'0"	12'6"	1177.1	37.5	588.5	Overburden :
			Thickness	5'3"		594.6		3121.7	7'3"
105W. 19.7	244N/105W.	1	L6096	12'9"	13'8"	924.7	29.3	847.6	
		2	L6097	13'9"	14'1"	708.2	23.4	236.1	
		3	L6098	14'7"	14'9"	245.2	8.6	40.8	
		4	L6099	15'0"	15'3"	1121.0	34.2	280.2	Overburden :
			Thickness	2'6"		561.9		1404.7	12'9"

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R.L.	CO-ORDINATES FROM S.E.CNR.CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
120W. R.L. 20.08	244N/120W.	1	L5512	13'6"	13'9"	977.4	33.1	244.3	
		2	L5513	14'0"	14'7"	1706.5	55.4	995.4	Overburden :
			Thickness	1'1"		1144.3		1239.7	13'6"
195W. 15.8	244N/195W.	1	L5514	8'3"	9'0"	2579.1	68.5	1934.3	
		2	L5515	12'0"	12'3"	1126.0	37.4	281.5	Overburden :
			Thickness	1'0"		2215.0		2215.8	0'0"-8'3") 9'0"-12'0") 11'3"
245W. 16.87	244N/245W.	1	L6100	4'0"	4'3"	195.5	7.2	-	
		2	L6101	8'6"	9'3"	2745.0	66.6	2058.7	
		3	L6102	10'9"	11'1"	2822.0	70.52	940.6	
		4	L6103	11'9"	12'0"	1731.0	47.5	432.7	Overburden :
		5	L6104	12'6"	13'0"	1949.0	51.59	974.5	0'0"-8'6") 9'3"-10'9") 10'0"
			Thickness	3'0"		1468.8		4406.5	
295W. 16.9	244N/295W.	1	L5516	6'9"	9'0"	350.4	11.7	788.4	
		2	L5517	9'6"	9'10"	2286.9	62.1	762.3	
		3	L5518	10'2"	10'5"	1920.8	55.5	480.2	Overburden :
			Thickness	3'8"		559.3		2050.9	6'9"

BORE NO. & R.L.	CO-ORDINATES FROM S.E. ENR. CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
320W. R. L. 17.06	244N/320W.	1	L5962	6'0"	7'6"	1120.0	35.5	1680.0	
		2	L5963	8'6"	8'9"	462.5	15.8	115.6	
		3	L5964	10'6"	11'3"	1261.0	38.7	945.7	Overburden :
			Thickness	5'3"		522.1		2741.3	6'0"
345W. 17.33	244N/345W.	1	L5965	5'3"	5'9"	380.8	13.6	190.4	
		2	L5966	8'0"	8'9"	2686.0	66.4	2014.5	
		3	L5967	10'6"	10'9"	562.4	18.8	140.6	Overburden :
		4	L5968	11'6"	11'10"	776.9	25.4	258.9	0'0"-5'3")
			Thickness	4'4"		612.8		2604.4	5'9"-8'0") 7'6"
397W. 18.0	244N/397W.	1	L5969	7'6"	8'0"	273.9	10.03	-	
		2	L5970	8'6"	9'0"	844.1	27.06	422.0	
		3	L5971	10'4"	10'10"	660.1	22.09	330.0	Overburden :
			Thickness	2'4"		322.7		752.0	8'6"
420W. 17.55	244N/420W.	1	L6105	7'9"	8'0"	346.5	12.2	-	
		2	L6106	8'6"	8'10"	553.7	18.7	184.6	Overburden :
			Thickness	0'4"		553.7		184.6	8'6"

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R. L.	CO-ORDINATES FROM S E CNR. CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
450W. R. L. 18.2	244N/450W.			T R A C E S.					
500W. 17.91	244N/500W.	1	L5972	8'6"	8'10"	617	22.02	205.6	
		2	L5973	10'9"	11'3"	76.3	2.8	-	Overburden :
				Thickness 0'4"		617		205.6	8'6"
550W. 18.5	244N/550W.			T R A C E.					
575W. 18.21	244N/575W.	1	L5975	12'0"	12'3"	896.9	36.9	224.2	Overburden :
				Thickness 0'3"		896.9		224.2	12'0"
600W. 18.6	244N/600W.	1	L5519	0'0"	9'6"	55.9	2.1	-	
		2	L5520	9'6"	9'9"	597.7	21.4	149.4	Overburden :
				Thickness 0'3"		597.7		149.4	9'6"
625W. 17.93	244N/625W.			T R A C E.					
650W. 18.2	244N/650W.	1	L5977	7'6"	12'0"	108.6	3.9	-	Grade too low.

[illegible]

QUANTITIES OF HEAVY MINERALS INTERSECTED IN BORES.

BORE NO. & R. L.	CO-ORDINATES FROM S E CNR. CHELSEA AV. AND ESP.	SAMPLE NO.		DEPTH		QUANTITY OF HEAVY MINERALS		THICKNESS OF SAMPLE (FT.) X (LBS. PER CU. YD).	REMARKS.
		FIELD	LABOR- ATORY	FROM	TO	LBS PER CU. YD.	WT. PER CENT		
850W. R. L. 19.74	244N/850W.	1	L5983	9'9"	10'6"	1080	34.01	810	Overburden :
			Thickness	0'9"		1080		810	9'9"
875W. 20.64	244N/875W.	1	L5984	10'6"	10'9"	413.4	13.8	103.3	
		2	L5985	10'9"	15'6"	24.1	0.8	-	Overburden :
			Thickness	0'3"		413.4		103.3	10'6"
900W. 19.5	244N/900W.	1	L5521	10'3"	11'9"	917.7	31.0	1376.5	
		2	L5522	11'9"	15'0"	80.2	2.9	-	Overburden :
			Thickness	1'6"		917.7		1376.5	10'3"
925W. 19.65	244N/925W.	1	L5986	8'0"	8'9"	989.1	31.5	741.8	
		2	L5987	11'6"	12'0"	1245.0	37.4	622.5	Overburden :
			Thickness	1'3"		1091.4		1364.3	0'0"-8'0") 8'9"-11'6") 10'9"

APPENDIX. TABLE B. PAGE 1.
Recreation Reserve.

WEIGHT OF MINERAL IN 1 YARD STRIP ALONG BORE LINE.

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
LINE 564N. 160E.	$\frac{1311.5}{3} = 437.2$	$\frac{1473.2}{2} = 736.6$	$\frac{20}{3}$	4,910.66
140E.	$\frac{3108.1}{3} = 1036.0$			
140E.	1036.0	$\frac{2223.1}{2} = 1111.5$	$\frac{45}{3} = 15.0$	16,672.5
95E.	$\frac{3561.2}{3} = 1187.1$			
95E.	1187.1	$\frac{2057.8}{2} = 1028.9$	$\frac{25}{3}$	8,574.2
70E.	$\frac{2612.1}{3} = 870.7$			
70E.	870.7	$\frac{870.7}{2} = 435.4$	$\frac{25}{3}$	3,628.0
45E.	Traces.			
45E.	Trace.	$\frac{400.4}{2} = 200.2$	$\frac{60}{3} = 20$	4,004.0
15W.	$\frac{1201.6}{3} = 400.4$			
15W.	400.4	$\frac{2187.8}{2} = 1093.9$	$\frac{50}{3}$	18,231.6
65W.	$\frac{5362.2}{3} = 1787.4$			
65W.	1787.4	$\frac{2178.4}{2} = 1089.2$	$\frac{50}{3}$	18,153.3
115W.	$\frac{1173}{3} = 391.0$			

564N.

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
115W.	391.0			
150W.	$\frac{676.7}{3} = 225.6$	$\frac{616.6}{2} = 308.3$	$\frac{35}{3}$	3,596.8
150W.	225.6			
165W.	$\frac{2237.3}{3} = 745.8$	$\frac{971.4}{2} = 485.7$	$\frac{15}{3} = 5$	2,428.5
165W.	745.8			
185W.	$\frac{1194}{3} = 398.0$	$\frac{1143.8}{2} = 571.9$	$\frac{20}{3}$	3,812.6
185W.	398.0			
205W.	$\frac{1027}{3} = 342.3$	$\frac{740.3}{2} = 370.2$	$\frac{20}{3}$	2,468.0
205W.	342.3			
285W.	$\frac{1684.7}{3} = 561.5$	$\frac{903.8}{2} = 451.9$	$\frac{80}{3}$	12,050.6
285W.	561.5			
345W.	$\frac{797.2}{3} = 265.7$	$\frac{827.2}{2} = 413.6$	$\frac{60}{3} = 20$	8,272.0
345W.	265.7			
385W.	$\frac{385.3}{3} = 128.4$	$\frac{394.1}{2} = 197.0$	$\frac{40}{3}$	2,626.6
385W.	128.4			
405W.	$\frac{126.9}{3} = 42.3$	$\frac{170.7}{2} = 85.4$	$\frac{20}{3}$	569.0

564N.

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
405W.	42.3			
465W.	$\frac{17.8}{3} = 5.9$	$\frac{48.2}{2} = 24.1$	$\frac{60}{3} = 20$	482.0
465W.	5.9			
525W.	Trace.	$\frac{5.9}{2} = 2.9$	$\frac{60}{3} = 20$	59.0
525W.	Trace.			
575W.	No Sample.			
575W.	No Sample.			
625W.	Trace.			
625W.	Trace.			
655W.	$\frac{404.9}{3} = 134.9$	$\frac{134.9}{2} = 67.4$	$\frac{30}{3} = 10$	674.0
655W.	134.9			
685W.	$\frac{292.0}{3} = 97.3$	$\frac{232.2}{2} = 116.1$	$\frac{30}{3} = 10$	1161.0
685W.	97.3			
825W.	$\frac{569.8}{3} = 189.9$	$\frac{287.2}{2} = 143.6$	$\frac{140}{3}$	6701.3

WEIGHT OF MINERAL IN 1 YARD STRIP ALONG BORE LINE.

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
LINE 244N.				
155E.	$\frac{548.4}{3} = 182.8$	$\frac{346.1}{2} = 173.0$	$\frac{20}{3}$	1153.3
135E.	$\frac{490.0}{3} = 163.3$			
135E.	163.3			
100E.	$\frac{1528.0}{3} = 509.3$	$\frac{672.6}{2} = 336.3$	$\frac{35}{3}$	3590.16
100E.	509.3			
65E.	$\frac{3484.9}{3} = 1161.6$	$\frac{1670.9}{2} = 835.4$	$\frac{35}{3}$	9746.3
65E.	1161.6			
10W.	$\frac{2004.7}{3} = 668.2$	$\frac{1829.8}{2} = 914.9$	$\frac{75}{3}$	22872.5
10W.	668.2			
35W.	$\frac{6206.8}{3} = 2068.9$	$\frac{2737.1}{2} = 1368.5$	$\frac{25}{3}$	11404.16
35W.	2068.9			
75W.	$\frac{3121.7}{3} = 1040.6$	$\frac{3109.5}{2} = 1554.7$	$\frac{40}{3}$	20729.3
75W.	1040.6			
105W.	$\frac{1404.7}{3} = 468.2$	$\frac{1508.8}{2} = 754.4$	$\frac{30}{3}$	7544.0

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
<u>LINE 244N. (Contd.).</u>				
105W.	468.2			
120W.	$\frac{1239.7}{3} = 413.2$	$\frac{881.4}{2} = 440.7$	$\frac{15}{3} = 5$	2203.5
120W.	413.2			
195W.	$\frac{2215.8}{3} = 738.6$	$\frac{1151.8}{2} = 575.9$	$\frac{70}{3}$	13437.6
195W.	738.6			
245W.	$\frac{4406.5}{3} = 1468.8$	$\frac{2207.4}{2} = 1103.7$	$\frac{50}{3}$	18395.0
245W.	1468.8			
295W.	$\frac{2050.9}{3} = 683.6$	$\frac{2152.4}{2} = 1076.2$	$\frac{50}{3}$	17936.66
295W.	683.6			
320W.	$\frac{2741.3}{3} = 913.8$	$\frac{1597.4}{2} = 798.7$	$\frac{25}{3}$	6655.8
320W.	913.8			
345W.	$\frac{2604.4}{3} = 868.1$	$\frac{1781.9}{2} = 890.9$	$\frac{25}{3}$	7424.1
345W.	868.1			
397W.	$\frac{752}{3} = 250.6$	$\frac{1118.7}{2} = 559.3$	$\frac{52}{3}$	9694.5
397W.	250.6			
420W.	$\frac{184.6}{3} = 61.5$	$\frac{312.1}{2} = 156.0$	$\frac{23}{3}$	1196.0

WEIGHT OF MINERAL IN 1 YARD STRIP ALONG BORE LINE.

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
LINE 244N. (Contd.)				
420W.	61.5	$\frac{61.5}{2} = 30.7$	$\frac{30}{3} = 10$	307
450W.	Trace.			
450W.	Trace.			
500W.	$\frac{205.6}{3} = 68.5$	$\frac{68.5}{2} = 34.2$	$\frac{50}{3} = 16.7$	570
500W.	68.5			
550W.	Trace.	$\frac{68.5}{2} = 34.2$	$\frac{50}{3}$	570
550W.	Trace.			
575W.	$\frac{224.2}{3} = 74.7$	$\frac{74.7}{2} = 37.3$	$\frac{25}{3}$	310.8
575W.	74.7			
600W.	$\frac{149.4}{3} = 49.8$	$\frac{124.5}{2} = 62.2$	$\frac{25}{3}$	1555.0
600W.	49.8			
625W.	Trace.	$\frac{49.8}{2} = 24.9$	$\frac{25}{3}$	622.5
625W.	Trace.			
650W.	Grade too low.	-	-	-
650W.	Grade too low.			
700W.	$\frac{649.9}{3} = 216.6$	$\frac{216.6}{2} = 108.3$	$\frac{50}{3}$	1805.0

WEIGHT OF MINERAL IN 1 YARD STRIP ALONG BORE LINE.

BORE NOS.	LBS. OF MINERAL PER SQ. YD. AT BORE. (FROM TABLE A.)	AVERAGE LBS. WEIGHT OF MINERAL PER SQ. YD. BE- TWEEN BORES.	DISTANCE BETWEEN BORES (YDS) (FROM TABLE A.)	WEIGHT OF MINERAL In 1 YD. STRIP BE- TWEEN BORES (LBS)
<u>LINE 244N. (Contd.).</u>				
700W.	216.6	$\frac{354.1}{2} = 177.0$	$\frac{20}{3}$	1180
720W.	$\frac{412.5}{3} = 137.5$			
720W.	137.5	$\frac{137.5}{2} = 68.7$	$\frac{30}{3} = 10$	687
750W.	No sample.			
750W.	No sample.			
780W.	Grade too low.			
780W.	Grade too low.			
800W.	$\frac{983.7}{3} = 327.9$	$\frac{327.9}{2} = 163.9$	$\frac{20}{3}$	1092.6
800W.	327.9	$\frac{597.9}{2} = 298.9$	$\frac{50}{3}$	4981.6
850W.	$\frac{810}{3} = 270.0$			
850W.	270.0	$\frac{304.4}{2} = 152.2$	$\frac{25}{3}$	1268.3
875W.	$\frac{103.3}{3} = 34.4$			
875W.	34.4	$\frac{493.2}{2} = 246.6$	$\frac{25}{3}$	2055.0
900W.	$\frac{1376.5}{3} = 458.8$			
900W.	458.8	$\frac{913.6}{2} = 456.8$	$\frac{25}{3}$	3806.6
925W.	$\frac{1364.3}{3} = 454.8$			

APPENDIX. TABLE C. PAGE 1. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

Recreation Reserve.

BORE NO.	THICKNESS (TABLE A.)			DISTANCE BETWEEN BORES. (TABLE A.) FEET	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE		
	AT BORE	AV. BETWEEN BORES					AV. THICKNESS		VOLUME OF 1 YD. STRIP CUBIC YDS.
	INCHES	INCHES	FEET		SQ. FEET	SQ. YDS.	FEET	INCHES	
LINE 564N.									
160E	33	34.5	$\frac{34.5}{12}$	20	57.5	6.39			
140E	36								
140E	36	43.5	$\frac{43.5}{12}$	45	163.1	18.12			
95E	51								
95E	51	49.5	$\frac{49.5}{12}$	25	103.1	11.45			
70E.	48								
70E	48	24	$\frac{24}{12}$	25	50	5.55			
45E	Trace.								
45E	Trace.	21	$\frac{21}{12}$	60	105	11.66			
15W	42								
15W	42	49.5	$\frac{49.5}{12}$	50	206.2	22.91			
65W	57								
65W	57	47.5	$\frac{47.5}{12}$	50	197.9	21.99			
115W	38								
115W	38	20.5	$\frac{20.5}{12}$	35	59.7	6.64			
150W	3								
150W	3	16.5	$\frac{16.5}{12}$	15	20.6	2.29			
165W	30								
TOTALS :				325	963.1	107.00			

Line 564N continued on Page 2.

APPENDIX. TABLE C. PAGE 2. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)			DISTANCE BETWEEN BORES. (TABLE A.)	AREA OF LONGITUDINAL SECTION		COMPLETE BORE LINE		
	AT BORE	AV. BETWEEN BORES			BETWEEN BORES.		AV. THICKNESS		VOLUME OF 1 YD. STRIP
	INCHES	INCHES	FEET		FEET	SQ. FEET	SQ. YDS.	FEET	
LINE 564N. Forward.	(Contd.)			325	963.1	107.00			
165W	30	28.5	$\frac{28.5}{12}$	20	47.5	5.27			
185W	27								
185W	27	30.0	$\frac{30}{12}$	20	50	5.55			
205W	33								
205W	33	39.5	$\frac{39.5}{12}$	80	263.3	29.26			
285W	46								
285W	46	32.5	$\frac{32.5}{12}$	60	162.5	18.05			
345W	19								
345W	19	13.5	$\frac{13.5}{12}$	40	45.0	5.00			
385W	18								
385W	18	10	$\frac{10}{12}$	20	16.6	1.85			
405W	2								
405W	2	2	$\frac{2}{12}$	60	10	1.11			
465W	2								
465W	2	1	$\frac{1}{12}$	60	5	.55			
525W	Trace.								
525W	Trace			50	-	-			
575W	No Sample.								
TOTALS:				735	1563.0	173.64			

Line 564N continued on page 3.

APPENDIX. TABLE C. PAGE 3. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

[illegible]

APPENDIX. TABLE C. PAGE 4. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)			DISTANCE BETWEEN BORES. (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE		
	AT BORE	AV. BETWEEN BORES			SQ. FEET	SQ. YDS.	AV. THICKNESS		VOLUME OF 1 YD. STRIP CUBIC YDS.
	INCHES	INCHES	FEET				FEET	INCHES	
LINE 244N. 155E	6	13.5	$\frac{13.5}{12}$	20	22.5	2.5			
135E	21								
135E	21	19.5	$\frac{19.5}{12}$	35	56.87	6.32			
100E	18								
100E	18	45.0	$\frac{45}{12}$	35	131.25	14.58			
65E	72								
65E	72	45.0	$\frac{45}{12}$	75	281.25	31.25			
10W	18								
10W	18	21.0	$\frac{21}{12}$	25	43.75	4.86			
35W	24								
35W	24	43.5	$\frac{43.5}{12}$	40	145.0	16.11			
75W	63								
75W	63	46.5	$\frac{46.5}{12}$	30	116.25	12.91			
105W	30								
105W	30	21.5	$\frac{21.5}{12}$	15	26.87	2.98			
120W	13								
TOTAL :				275	823.74	91.51			

APPENDIX. TABLE C. PAGE 5. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)			DISTANCE BETWEEN BORES. (TABLE A.) FEET	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE		
	AT BORE	AV. BETWEEN BORES			SQ. FEET	SQ. YDS.	AV. THICKNESS		VOLUME OF 11D. STRIP CUBIC YDS.
	INCHES	INCHES	FEET				FEET	INCHES	
LINE 244N. (Contd.). Forward.	-			275	823.74	91.51			
120W	13	12.5	<u>12.5</u> 12	75	78.1	8.67			
195W	12								
195W	12	24	<u>24</u> 12	50	100	11.11			
245W	36								
245W	36	40	<u>40</u> 12	50	166.66	18.51			
295W	44								
295W	44	53.5	<u>53.5</u> 12	25	111.45	12.38			
320W	63								
320W	63	57.5	<u>57.5</u> 12	25	119.79	13.31			
345W	52								
345W	52	40	<u>40</u> 12	52	173.33	19.26			
397W	28								
397W	28	16	<u>16</u> 12	23	30.66	3.40			
420W	4								
TOTAL :				575	1603.73	178.15			

APPENDIX. TABLE C. PAGE 6. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)			DISTANCE BETWEEN BORES. (TABLE A.) FEET	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE		
	AT BORE	AV. BETWEEN BORES			SQ. FEET	SQ. YDS.	AV. THICKNESS		VOLUME OF 1 YD. STRIP CUBIC YDS.
	INCHES	INCHES	FEET				FEET	INCHES	
LINE 244N. (Contd.)									
Forward.				575	1603.73	178.15			
420W	4	2	$\frac{2}{12}$	30	5	.55			
450W	Trace.								
450W	Trace	2	$\frac{2}{12}$	50	8.33	.92			
500W	4		$\frac{2}{12}$						
500W	4	2	$\frac{2}{12}$	50	8.33	.92			
550W	Trace.								
550W	Trace.	1.5	$\frac{1.5}{12}$	25	3.12	.34			
575W	3								
575W	3	3	$\frac{3}{12}$	25	6.25	.69			
600W	3		$\frac{3}{12}$						
600W	3	1.5	$\frac{1.5}{12}$	25	3.12	.34			
625W	Trace.								
625W	Trace.								
		-	-	25	-	-			
650W	Grade too low.								
TOTAL :				805	1637.88	181.91			

APPENDIX. TABLE C. PAGE 7. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)			DISTANCE BETWEEN BORES. (TABLE A.)	AREA OF LONGITUDINAL SECTION		COMPLETE BORE LINE		
	AT BORE	AV. BETWEEN BORES			BETWEEN BORES.		AV. THICKNESS		VOLUME OF 1 YD. STRIP.
	INCHES	INCHES	FEET		FEET	SQ. FEET	SQ. YDS.	FEET	INCHES
LINE 244N. (Contd.)									
Forward.				805	1637.88	181.91			
650W	Grade top	low.							
		10	$\frac{10}{12}$	50	41.66	4.63			
700W	20								
700W	26	12.5	$\frac{12.5}{12}$	20	20.83	2.31			
720W	5								
720W	5								
		2.5	$\frac{2.5}{12}$	30	6.25	.69			
750W	No Sample.								
750W	No Sample.								
		-	-	30	-				
780W	Grade top	low.							
780W	Grade top	low.							
		1	$\frac{1}{12}$	20	1.66	.18			
800W	2								
800W	2								
		5.5	$\frac{5.5}{12}$	50	22.91	2.54			
850W	9								
850W	9								
		6	$\frac{6}{12}$	25	12.50	1.39			
875W	3								
TOTALS :				1030	1743.69	193.65			

APPENDIX. TABLE C. PAGE 8. VOLUME AND AVERAGE THICKNESS OF MINERAL-BEARING SAND ALONG BORE LINE.

[illegible]

APPENDIX. TABLE D. PAGE 1.

VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

Recreation Reserve.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BE- TWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET	FEET	SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 564N.							
160E	0.25	4.87	20	97.4	10.82		
140E	9.5						
140E	9.5	10.7	45	481.5	53.50		
95E	12.0						
95E	12.0	9.5	25	237.5	26.40		
70E	7.0						
70E	7.0	3.5	25	87.5	9.72		
45E	Trace						
45E	Trace	8.0	60	480.0	53.33		
15W	16.0						
15W	16.0	15.7	50	785.0	87.22		
65W	15.5						
65W	15.5	15.1	50	755.0	83.90		
115W	14.75						
115W	14.75	15.3	35	535.5	59.50		
150W	16.0						
150W	16.0	13.7	15	205.5	22.83		
165W	11.5						
111E							

325

3664.9

407.22

VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BE- TWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET	FEET	SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 564N. (Contd.).							
Forward.-			325	3664.9	407.22		
165W	11.5	11.1	20	222.0	24.66		
185W	10.75						
185W	10.75	9.3	20	186.0	20.66		
205W	8.0						
205W	8.0	8.1	80	648.0	72.0		
285W	8.25						
285W	8.25	8.3	60	498.0	55.33		
345W	8.41						
345W	8.41	9.08	40	363.2	40.35		
385W	9.75						
385W	9.75	9.9	20	198.0	22.00		
405W	10						
405W	10	5	60	300.0	33.33		
465W	-						
465W	-	-	60	-	-		
525W	Trace.						
525W	Trace.	-	50	-	-		
575W	No Sample.						
575W	No Sample.	-	50	-	-		
625W	Trace.						
TOTALS :			785	6080.1	675.55		

VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BE- TWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET	FEET	SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 564N. (Contd.) Forward.			785	6080.1	675.55		
625W	Trace	6.7	30	201.0	22.33		
655W	13.5						
655W	13.5	11.7	30	351.0	39.0		
685W	10.0						
685W	10.0	11.5	140	1610.0	178.88		
825W	13.1						
TOTALS :			985	8242.1	915.76	8.3	915.76

VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BE- TWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET		SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 244N. 155E							
155E	4.0						
		7.0	20	140	15.55		
135E	10.0						
135E	10.0	11.0	35	385	42.77		
100E	12.0						
100E	12.0	8.5	35	297.5	33.05		
65E	5.16						
65E	5.16	11.2	75	840.0	93.3		
10W	17.25						
10W	17.25	17.6	25	440.0	48.88		
35W	18						
35W	18	12.6	40	504.0	56.00		
75W	7.25						
75W	7.25	10	30	300.0	33.33		
105W	12.75						
105W	12.75	13.12	15	196.8	21.86		
120W	13.5						
120W	13.5	12.3	75	922.5	102.5		
195W	11.25						
TOTALS :			350	4025.8	447.24		

VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BE- TWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET	FEET	SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 244N. (Contd.).							
Forward.			350	4025.8	447.24		
195W.	11.25	10.6	50	530.0	58.88		
245W.	10.0						
245W	10.0	8.3	50	415.0	46.11		
295W	6.75						
295W	6.75	6.3	25	157.5	17.50		
320W	6						
320W	6	6.7	25	167.5	18.61		
345W	7.5						
345W	7.5	8.0	52	416.0	46.22		
397W	8.5						
397W	8.5	8.5	23	195.5	21.72		
420W	8.5						
420W	8.5	4.2	30	126.0	14.00		
450W	Trace.						
450W	Trace.	4.2	50	210.0	23.33		
500 W	8.5						
TOTAL :			655	6243.3	693.61		

VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BETWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET	FEET	SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 244N. (Contd.). Forward.			655	6243.3	693.61		
500W	8.5	4.2	50	210.0	23.33		
550W	Trace.						
550W	Trace	6.0	25	150.0	16.66		
575W	12.0						
575W	12.0	10.7	25	267.5	29.72		
600W	9.5						
600W	9.5	4.7	25	117.5	13.05		
625W	Trace.						
625W	Trace.		25	-	-		
650W	Grade too low.						
650W	Grade too low.	4.7	50	235.0	26.11		
700W	9.5						
700W	9.5	8.9	20	178.0	19.77		
720W	8.25						
720W	8.25	4.1	30	123.0	13.66		
750W	No Sample.						
750W	No Sample.		30	-	-		
780W	Grade too low.						
TOTAL :			935	7524.3	835.91		

APPENDIX. TABLE D. PAGE 7. VOLUME AND AVERAGE THICKNESS OF OVERBURDEN ALONG BORE LINE.

BORE NO.	THICKNESS (TABLE A.)		DISTANCE BETWEEN BORES (TABLE A.)	AREA OF LONGITUDINAL SECTION BETWEEN BORES.		COMPLETE BORE LINE.	
	AT BORE	AVERAGE BE- TWEEN BORES				AVERAGE THICKNESS	VOLUME OF 1YD STRIP
	FEET	FEET	FEET	SQUARE FEET	SQUARE YARDS	FEET	CUBIC YARDS
LINE 244N. (Contd.). Forward.			935	7524.3	835.91		
780W	Grade too low.						
800W	10.75	5.3	20	106.0	11.77		
800W	10.75						
850W	9.75	10.2	50	510.0	56.66		
850W	9.75						
875W	10.5	10.1	25	252.5	28.05		
875W	10.5						
900W	10.25	10.3	25	257.5	28.61		
900W	10.25						
925W	10.75	10.5	25	262.5	29.16		
TOTALS :			1080	8912.8	990.16	8.25	990.16
=====							

Recreation Reserve.

AND OF OVERBURDEN BETWEEN BORE LINES.

LINES	A D J U G B O R E L I N E S			A V E R A G E B E T W E E N B O R E L I N E S.		
	WEIGHT OF MINERAL PER 1 YARD STRIP. FROM TABLE B. LBS.	AREA OF LONGITUDINAL SECTION OF		WEIGHT OF MINERAL PER 1 YARD STRIP.	AREA OF LONGITUDINAL SECTION OF	
		MINERAL-BEARING SANDS FROM TABLE C. SQ. YARDS	OVERBURDEN FROM TABLE D. SQ. YARDS		MINERAL-BEARING SANDS	OVERBURDEN
Base Line 1) A	189,832.80	193.31	872.58	172,301.76	192.41	886.56
Base Line 2)	154,770.73	191.52	900.55			
Base Line 2) B	154,770.73	191.52	900.55	145,274.75	191.04	908.13
Base Line 3)	135,778.78	190.56	915.72			
Base Line 3) C	135,778.78	190.56	915.72	129,204.64	190.22	920.96
Base Line 4) To 835W.	122,630.50	189.89	926.21			
To 770W. Base Line 4) D	119,282.74	184.40	845.14	105,084.14	182.48	846.91
Base Line 5)	90,885.54	180.57	848.69			

TABLE F.

TOTAL WEIGHT OF HEAVY MINERAL CONCENTRATE, TOTAL VOLUME OF MINERAL-BEARING SANDS AND TOTAL VOLUME OF OVERBURNEN BETWEEN BORE LINES.

&

APPENDIX. TABLE F. A.

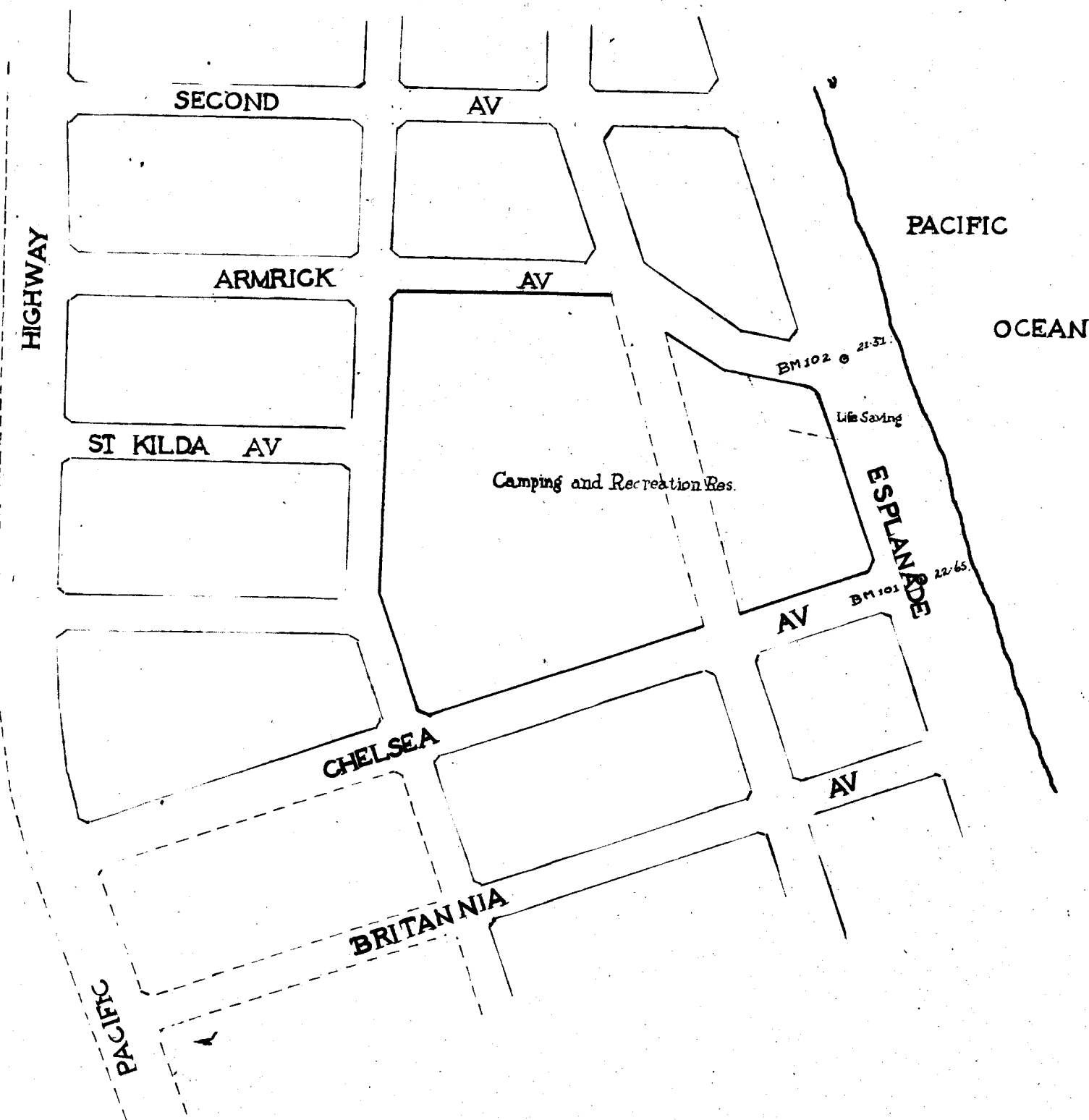
TOTAL WEIGHT OF HEAVY MINERAL CONCENTRATE, TOTAL VOLUME OF MINERAL-BEARING SANDS AND TOTAL VOLUME OF OVERBURDEN BETWEEN BORE LINES.

BORE LINES (TABLE A.)				WT. OF HEAVY MIN. CONC.		VOL. OF MINERAL-BEARING SANDS		VOL. OF OVERBURDEN	
DESIG-NATION	LENGTH	DISTANCE BETWEEN	AREA BETWEEN	AV. PER 1 YD. STRIP (TABLE E.)	TOTAL BETWEEN LINES	AV. AREA OF LONGI-TUDINAL SECTION. (TABLE E.)	VOL. BETWEEN BORE LINES.	AV. AREA OF LONG. SECTION (TABLE E.)	VOL. BETWEEN BORE LINES.
Y	YDS.	YDS.	SQ. YDS.	LBS.	TONS	SQ. YDS.	CU. YDS.	SQ. YDS.	CU. YDS.
Base Line 1) Base Line 2)	E. 25	80	2000	8771.58	313.27	6.58	526.4	84.12	6729.6
Base Line 2) Base Line 4)	F. 12.5	$\frac{220}{3}$	916. $\dot{6}\dot{6}$	3942.25	129.06	3.27	239.8	42.72	3132.8
Base Line 4) Base Line 5)	G. 32.5	$\frac{200}{3}$	2166. $\dot{6}\dot{6}$	1632.82	48.59	2.86	190. $\dot{6}\dot{6}$	41.52	2768.33
From Base Line 5) North)	H.		3033. 33		100.00	21.39	437.42	285.8	5844.57

APPENDIX. TABLE G.

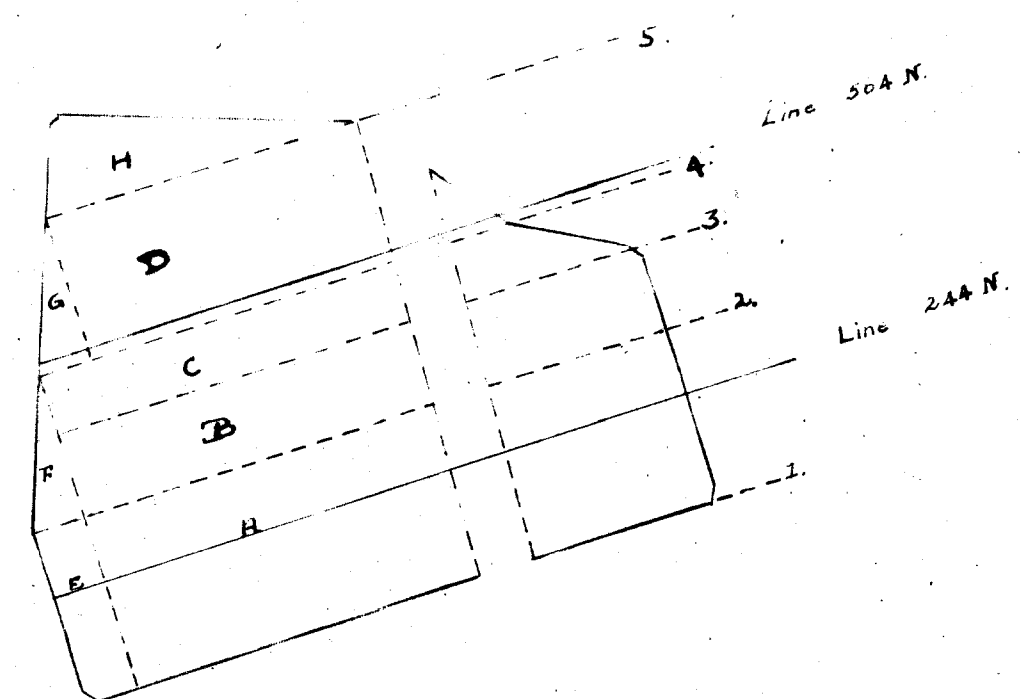
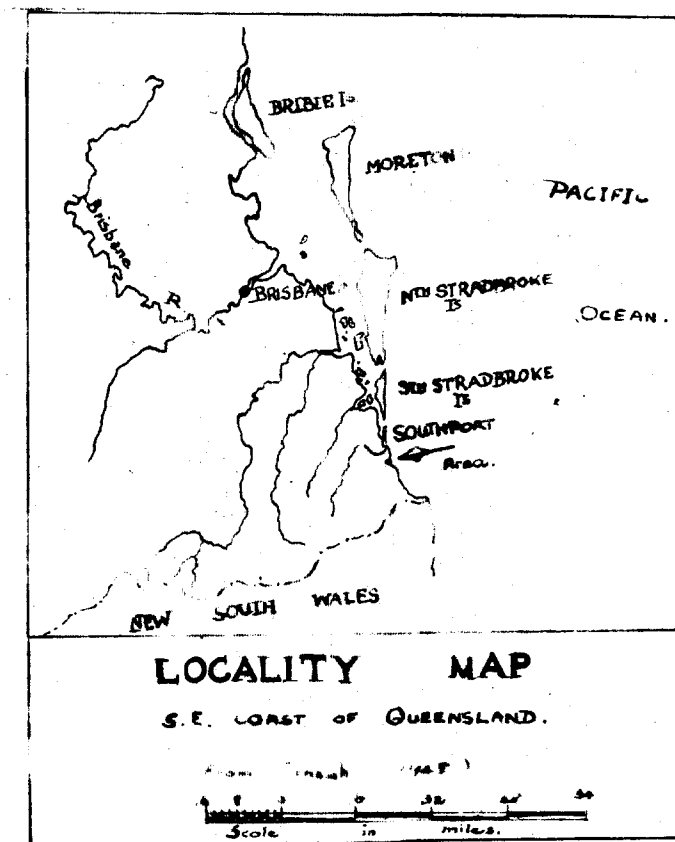
AVERAGE THICKNESSES OF MINERAL-BEARING SANDS AND OF OVERBURDEN.

BORE LINES (TABLE F.)		VOLUME (TABLE F.)		AVERAGE THICKNESS.			
DESIGNATION.	AREA BETWEEN LINES	MINERAL-BEARING SANDS	OVERBURDEN	MINERAL-BEARING SANDS		OVERBURDEN	
	SQUARE YARDS	CUBIC YARDS	CUBIC YARDS	FEET	INCHES	FEET	INCHES
Block A.	26532.8	15392.8	70924.8	1	8.8	8	0.1
Block B.	14371.93	8278.4	39352.3	1	8.5	8	2.2
Block C.	9949.80	5706.6	27628.8	1	8.5	8	3.7
Block D.	20666.66	12165.33	56460.66	1	8.8	8	2.2
Block E.	2000.00	526.4	6729.6	0	9.3	10	0.9
Block F.	916.66	239.8	3132.8	0	9.3	10	2.7
Block G.	2166.66	190.66	2768.33	0	2.8	3	9.7
Block H.	3033.33	437.42	5844.57	0	5.0	5	9.1



BROADBEACH RECREATION RESERVE.

Scale: 4 Chains to an Inch.



Plan showing lines and blocks.

(Used in calculating tonnages, etc.)

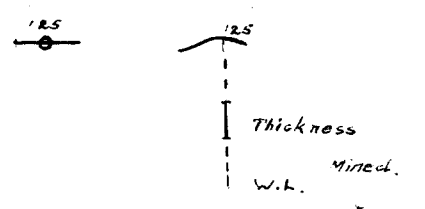
Scale 4chs. to an Inch.

AREA: BROADBEACH RECREATION RESERVE.

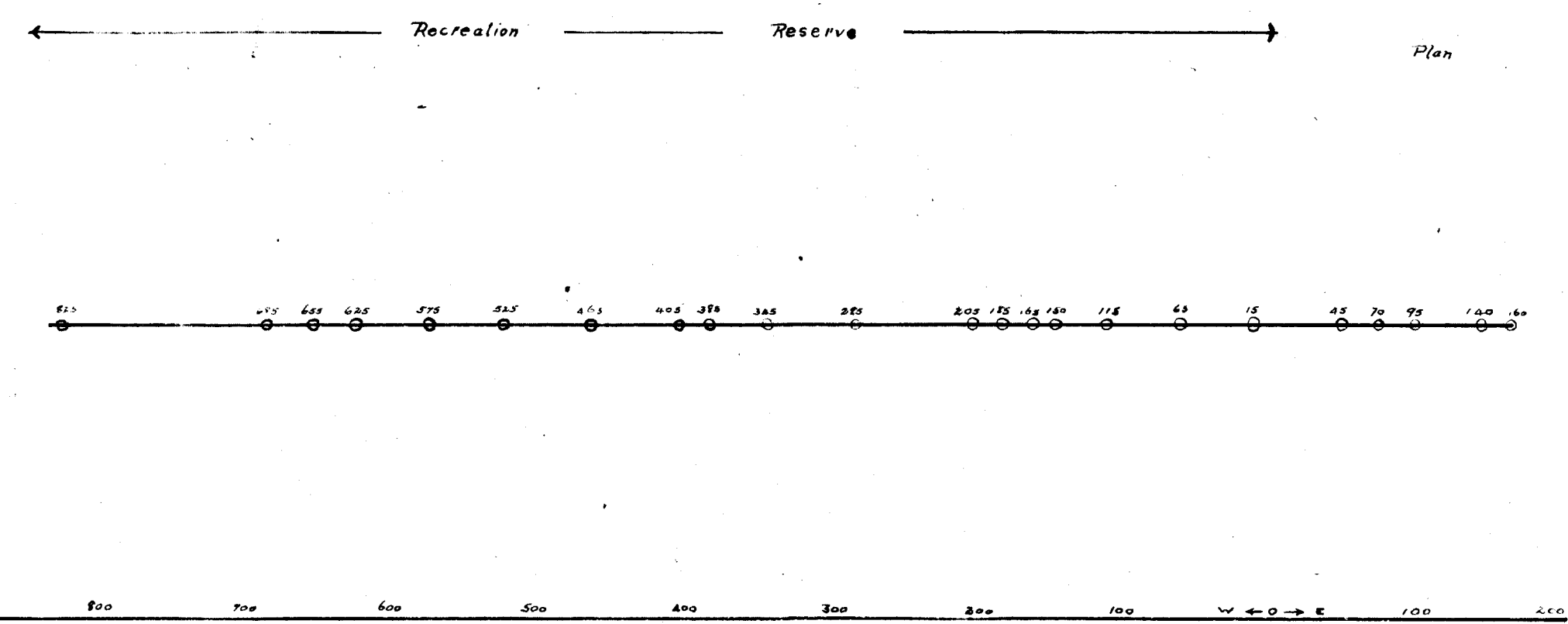
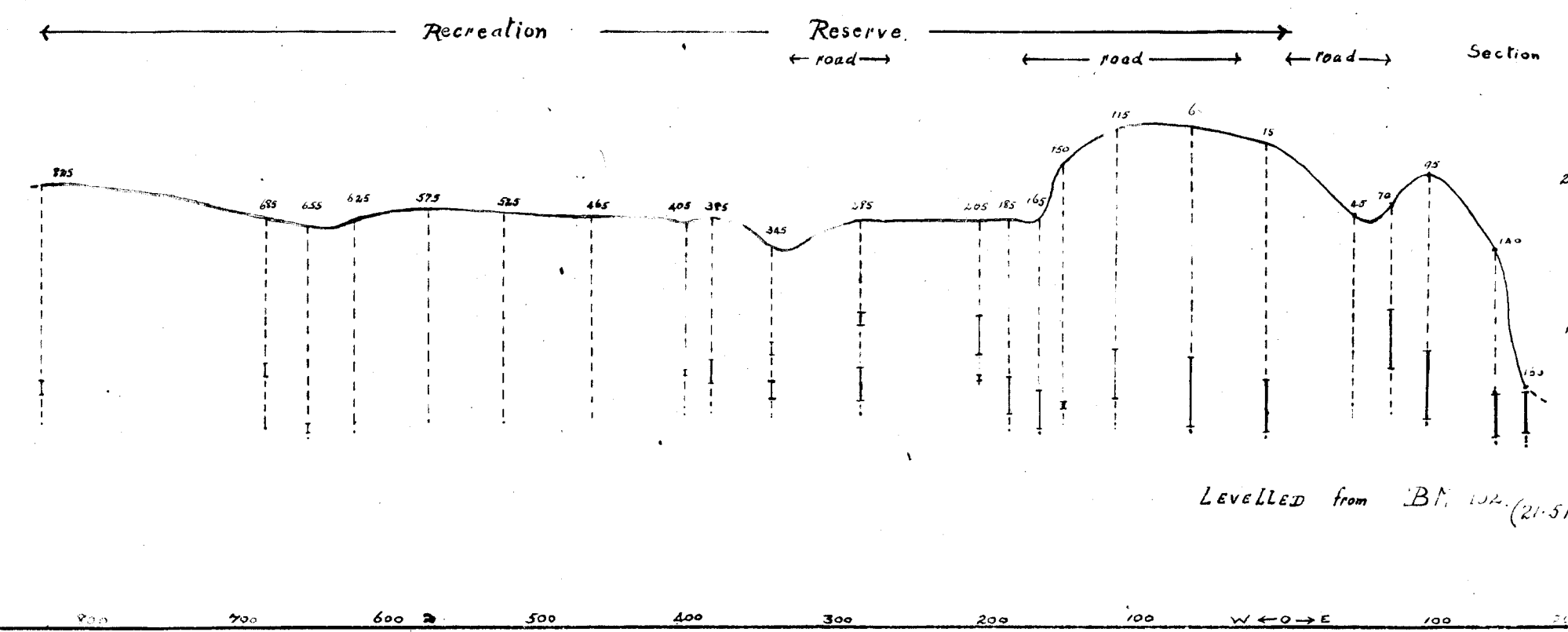
HORIZONTAL SCALE 1" = 100'

VERTICAL SCALE 1" = 10'

Bore



LINE 564 N



LINE 244 N

