DEPARTMENT OF MINES
SOUTH AUSTRALIA

TANTANOOLA DOLOMITE DEPOSIT (UP AND DOWN ROCKS)

(AUSTRALIAN GLASS MANUFACTURERS CO. PTY. LTD.)

by

R. K. Johns
Senior Geologist

Plan & Cross Sections No.	Title	Scale
63-71	Tantanoola Dolomite Deposit Up and Down Rocks	100 ft. = 1 inch

Rept. Bk. No. 56/45
G.S. No. 2553
D.M. 1140/62

25th February, 1963

DEPARTMENT OF MINES
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TANTANOOLA DOLOMITE DEPOSIT (UP AND DOWN ROCKS)

(AUSTRALIAN GLASS MANUFACTURERS CO. PTY. LTD.)

INTRODUCTION

A quarry formerly operated for the production of ballast at Up and Down Rocks, three miles southeast of Tantanoola has been acquired by the above company for the production of dolomite to be used in the manufacture of plate glass. Approximately ½ million cub. yds. of hard dolomite have previously been quarried for the provision of ballast for the South Australian Railways Department and for Highways and Local Government Department use.

The company holds leases (nos. 3425, 3426, 3427 and 3428) over parts sections 204, 205 and 200 and have right of entry in section 195, Hd. Hindmarsh. The leases cover almost the entire outcrop of dolomite in the locality and adjoin a Pleasure Resort Reserve (Section 213). A crusher, elevator and bins have been constructed in the floor of the old quarry.

Requirements of the company are 4,000 tons/year initially and increasing to 6,000 tons/year. The physical state of the stone is unimportant but specifications call for an even grade approximating 17.4% MgO.

Following a request from the company to ascertain reserves and grade of dolomite available a diamond drilling programme was designed and was completed in December 1963. This report incorporates the results of these operations.

REFERENCES

COCHRANE, G.W. (1952)a "Dolomite Deposits at Up and Down Rocks near Tantanoola". Mining Review 92, pp. 71-78.

COCHRANE, G.W. (1952)b "Dolomites of the Lower South East". Mining Review 93, pp. 117-121.

GEOLOGICAL SETTING

Geological aspects of this deposit have been discussed in some detail by Cochrane (1952)a and b who concluded that the dolomites have developed by metasomatic replacement of original Tertiary bryozoal limestones and "though themselves representing a Pleistocene stranded sea cliff, the Up and Down Rocks approximately coincide with the probable line of the Tartwaup fault. Field observations and drilling data, however, show a subsidiary monoclinal structure to be present". Pleistocene gritty limestones have been preserved at the foot of the fossil cliff and also at higher levels, marking two Pleistocene marine transgressions.

The main cliff consists of resistant hard pink and yellow brown dolomites which change laterally into beds of variable colour, hardness and composition. Dolomitization is irregular and unpredictable and pink, brown, yellow or grey dolomites may pass vertically and also laterally into normal white highly calcareous bryozoal limestones gradually or more often abruptly. The dolomites are generally homogeneous and massive though bedding planes are plainly discernible (plate I) - shells and bryozoa are only occasionally preserved. Solution channels and cavities are common, the two largest caves being preserved in the Tourist Reserve where stalactites, stalagmites and solution phenomena are well developed.

The bryozoal limestones in the Tantanoola region are generally horizontal but in the area under review the Tertiary strata are inclined at low to moderate (40°) angles and display a monoclinal fold structure.

The accompanying plan (63-71) comprises the southern part of the area mapped by Cochrane; geological boundaries have been modified, quarry limits have been established and the area resurveyed.

DIAMOND DRILLING OPERATIONS

During 1949 twenty diamond drill holes were constructed to outline reserves of hard ballast material for the S.A. Railways - 13 of these were located near the northern extremity of the present main quarry. Seven other bores were sited near the northern extremity of the deposit and all but two of these are located in the Cave reserve. This boring proved that overburden (soil or gritty limestone) was negligible, that up to 60 ft. of hard massive pink and yellow brown dolomite was present, and this passed down into soft 'sugary' yellow dolomite (up to 10 ft. thick) and this into bryozoal limestone. Only one bore (in the northern sector) failed to intersect dolomite and this penetrated bryozoal limestone throughout its extent (43 ft.). This boring confirmed the geological structure and outlined the occurrence of hard stone. Subsequent quarry operations extended southerly from the area drilled.

Current diamond drilling operations were designed to procure samples beyond present quarry limits in M.L. 3426 (section 200) and in the adjoining Section 195 (Hd. Hindmarsh) where dolomite outcrops are sparse and are concealed over large areas by Pleistocene limestones, kunkar and Recent soils. During the period 8/11/62 to 14/12/62 22 bores were completed having an aggregate footage of 1018 ft. 8 ins.

Core recovery was generally good where the dolomites were hard, core losses being attributable chiefly to the occurrence of 'sugary' dolomite. In the following table are summarised drilling results

Bore No.	Depth	Core Recovery %	Remarks
Z8	49'0"	63	14 ft. overburden
Y8	50'0"	43	Bryozoal limestone throughout.
X8	50'0"	72	" " "
Z7	43'6"	77	12 ft. 3 ins. overburden; limestone at 15ft.-17ft.
Y7	50'0"	64	11 ft. 6 ins. overburden.
X7	44'0"	78	Bryozoal limestone throughout.
Y6	49'6"	62	11 ft. overburden
X6	48'10"	66	Bryozoal limestone throughout.
Y5	48'0"	66	Thin band unreplaced limestone.
X5	42'0"	67	Partially dolomitized limestone in part.
Y4	33'6"	67	Dolomitic limestone.
X4	41'0"	76	Dolomitic limestone over bryozoal limestone.
Y3	36'3"	45	6'9" overburden, cavity at 28'3"
X3	48'6"	75	3'6" overburden.
Y2	49'8"	66	7'9" overburden, bands of powdery dolomite.
X2	50'0"	82	Unconsolidated dolomite in parts.
Z1	50'0"	97	5 ft. overburden.
Y1	49'5"	81	Soft powdery dolomite in parts.
X1	46'0"	59	Cavity at bottom; powdery dolomite in part.
Z01	49'6"	90	Generally hard dolomite.
Y01	50'0"	98	Hard dense dolomite
X01	40'0"	20	Generally powdery and unconsolidated dolomite throughout.

CHEMICAL ANALYSES OF CORES

All cores from current drilling operations and relevant ones from the 1949 programme were split and submitted for chemical analysis - the analyses being incorporated with the bore logs in the Appendix.

Dolomite intersected beyond both the northern and southern extremities of the quarry proved to be of fairly uniform grade and containing 17.0 to 18.7% MgO.

East of the quarry intersections of partially dolomitized limestone and of fairly pure bryozoal limestone were common.

RESERVES

Accepting 17.0% as the lowest grade of dolomite acceptable, development of the quarry in a northerly direction to encompass the area 50 ft. beyond the limits proved in bores AD1, AE1, AF1, A5, AF2, AE2 and AD2 would yield 260,000 cub. yds. of dolomite. Overburden is absent.

Beyond the quarry in asoutherly direction bores Y2, X2, Z1, Y1, X1, Z01, Y01 and X01 all penetrated uniformly high grade dolomite (17.8 - 18.7% MgO). To the limit of boring (generally 50 ft.) and assuming continuity ofgrade 50 ft. beyond the area outlined by these bores the reserves amount to 380,000 cub. yds. Overburden is generally thin.

CONCLUSIONS

Reserves of 640,000 cub. yds. of dolomite have been outlined at Up and Down Rocks easily recoverable by extending the present quarry in northerly and southerly directions. In the north 260,000 cub. yds. of dolomite have been proved, the weighted average chemical composition of all intersections being MgO 17.9%, CaO 33.7%, SiO_2 0.29% and Fe_2O_3 1.28%. The limits here have not been determined though a restriction on operations

in this direction will be imposed if the Tantanoola Cave is to be preserved.

Development of the existing quarry face in southerly and easterly directions will allow recovery of 380,000 cub. yds. of dolomite - the weighted composition of all borehole intersections being MgO 18.4%, CaO 33.9%, SiO_2 0.27% and Fe_2O_3 0.24%. Lateral and vertical limits to the high grade dolomite have not been determined here.

Boring east of the quarry has proven inferior partially dolomitized magnesian limestones which pass laterally into bryozoal limestones.

R. K. Johns
Senior Geologist
NON-METALLIC MINERALS SECTION

RKJ:AGK
22/2/63

PLATE I

Tantanoola Dolomite Quarry

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X01 BORE SER. NO. DD: 83/63

HUNDRED: HINDMARSH SECTION: 195 R.L. OF COLLAR: 232

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS 40/192

DATE DRILLING COMMENCED: 12/12/62 DATE DRILLING COMPLETED: 12/12/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	5	0	1	6	Hard dolomite bands in loose dolomite 'sand'.
5	0	8	0	1	6	Pale yellow brown dolomite 'sand'.
8	0	8	6	0	6	Hard brown dolomite
8	6	15	6	2	0	Offwhite dolomite 'sand' with thin loosely consolidated bands
15	6	22	6	nil		No core
22	6	26	0	0	9	Weakly consolidated saccharoidal dolomite.
26	0	40	0	1	9	Buff to pale pink hard to soft and unconsolidated dolomite.

3

40 0

Partial Chemical Analysis

	CaO	MgO	SiO_2	Fe_2O_3
0 40 0	33.7	17.8	1.40	0.23

Bore logged by R.K Johns

Date 18/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y01 BORE SER. NO. DD 34/63

HUNDRED: HINDMARSH SECTION: 195 R.L. OF COLLAR: 220

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 13/12/62 DATE DRILLING COMPLETED: 13/12/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	40	0	39	0	Hard buff, pink and grey dolomite generally dense but leached in parts.
40	0	50	0	10	0	Very hard fairly dense pink dolomite.

Partial Chemical Analysis

	CaO	MgO	SiO_2	Fe_2O_3
0 50 0	34.1	18.4	0.29	0.21

Bore logged by R.K. Johns

Date 18/12/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Z01 BORE SER. NO. DD 85/63

HUNDRED: HINDMARSH SECTION: 195 R.L. OF COLLAR: 204 49.5 154.5

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 14/12/62 DATE DRILLING COMPLETED: 14/12/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
0		49	6	44	6	Pale yellowbrown and pink hard dolomite (dense to somewhat leached in parts).

Partial Chemical Analysis

				CaO	MgO	SiO_2	Fe_2O_3
0		49	6	33.7	18.6	0.21	0.22

Bore logged by R.K. Johns

Dated 18/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X1 BORE SER. NO. DD: 75/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 240 ±

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 6/12/62 DATE DRILLING COMPLETED: 6/12/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	16	0	6	6	Buff strongly cemented to unconsolidated dolomite 'sand'.
16	0	43	0	20	6	Buff to pale pink moderately hard, somewhat porous dolomites.
43	0	46	0	nil		

Partial Chemical Analysis

			CaO	MgO	SiO_2	Fe_2O_3
0	43	0	33.3	18.7	0.17	0.18

Bore logged by R.K. Johns

Date: 18/12/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y1 BORE SER. NO. DD: 55/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 230 ft 5 in

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 8/11/62 DATE DRILLING COMPLETED: 12/11/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	5	0	1	5	Hard buff to pale pink dolomite with fine solution cavities.
5	0	9	5	3	2	Pale pink dolomite, sugary at first.
9	5	14	7	2	8	Pale pink soft sugary dolomite passing down into hard leached stone.
14	7	16	8	1	0	Yellow brown dolomite
16	8	19	6	2	8	Pale yellow to pink dolomite
19	6	22	3	2	8	Hard pale pink dolomite
22	3	23	6	1	3	Soft yellow brown dolomite
23	6	29	0	5	0	Yellow brown to pale pink dolomite - somewhat leached and powdery at 26'-26'6" and 28'6"-29'0"
29	0	49	5	20	5	Hard and generally dense pale pink to yellow brown dolomite.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
	0	29	0	34.0	18.2	0.21	0.18
29	0	49	5	33.6	18.5	0.28	0.27

Bore logged by R.K. Johns

Date 23/11/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Z1 BORE SER. NO. DD: 76/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 214

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 7/12/62 DATE DRILLING COMPLETED: 7/12/6

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	0	6	0	2	Red brown sandy clay.
0	6	3	0	2	0	Sandy limestone
3	0	5	0	2	0	Hard pale pink dolomite with sandy limestone occupying solution channels.
5	0	50	0	44	6	Pale pink and yellow brown hard, generally dense but in part somewhat leached dolomite. At 28'6" - 29'0" leached manganiferous fracture.

Partial Chemical Analysis

		CaO	MgO	SiO_2	Fe_2O_3
5	0	50	0	33.7	18.3	0.49	0.31

Bore Logged by R.K Johns

Date 18/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X2 BORE SER. NO. DD: 74/

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 245

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 5/12/62 DATE COMPLETED: 5/12/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	5	0	3	3	Hard buff dolomite
5	0	8	0	2	0	Soft to moderately hard buff dolomite.
8	0	11	6	1	2	Very soft unconsolidated dolomite with thin hard bars
11	6	14	0	1	6	
14	0	18	9	3	0	Loosely consolidated to hard pale pink and brown dolomite
18	9	23	0	3	0	Moderately hard pale pink dolomite.
23	0	50	0	27	0	Brown and yellow moderately hard to loosely consolidated dolomite with thin hard dense pale pink bands.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
	0	23	0	33.8	18.4	0.40	0.25
23	0	50	0	33.5	18.8	0.32	0.32

Bore logged by R.K. Johns

Date 7/12/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y2 BORE SER. NO. DD. 57/6

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 247

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 12/11/62 DATE DRILLING COMPLETED: 13/11/

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	0	6	0	6	Kunkar with little clay.
0	6	5	0	1	3	Sandy limestone with shell fragments.
5	0	7	9	0	9	Leached shelly dolomite.
7	9	13	0	1	6	Hard dense pale pink dolomite bars in soft powdery dolomite.
13	0	15	6	nil		
15	6	21	0	3	9	Buff to pale pink dolomite, leached and generally soft at first.
21	0	24	9	2	0	Pink and yellow brown fairly hard dolomite.
24	9	28	7	2	6	Brown dense and porous dolomite.
28	7	49	8	20	5	Yellow brown, brown and pale pink porous hard dolomite.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
7	9	28	7	33.6	18.5	0.24	0.27
28	7	49	8	33.5	18.6	0.22	0.29

Bore logged by R.K. Johns

Date 23/11/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X3 BORE SER. NO. DD 73/61

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 263

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 4/12/62 DATE DRILLING COMPLETED: 5/12/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	3	6		6	Brown clayey sandwith kunkar
3	6	48	6	36	0	Pale pink to pale brown moderately hard porous to very hard and dense dolomite - hard dense stone at 3'6" - 8'0" 12'6" - 22'0" 28' - 34' and 37' - 48'6"

Partial Chemical Analysis

		CaO	MgO	SiO_2	Fe_2O_3
0	48	6		36.0	16.5	0.81	0.25

Bore logged by R. K. Johns

Date 7/12/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y3 BORE SER. NO. DD 58/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 266

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 13/11/62 DATE DRILLING COMPLETED: 15/11/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	6	9	4	8	Sandy limestone with occasional shells.
6	9	14	0	0	7	Soft pale yellow brown dolomitized limestone.
14	0	19	6	4	6	Pale yellow brown dolomite.
19	6	28	3	4	3	" " " "
28	3	33	6	nil		Cavity
33	6	36	3	2	2	Yellow brown dolomite.

Partial Chemical Analysis

			CaO	MgO	SiO2	Fe2O3
6	9	36	3	38.9	12.4	3.41	0.27

Bore loggedby R. K. Johns

Date 23/11/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X4 BORE SER. NO. DD: 69/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 272

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 30/11/62 DATE DRILLING COMPLETED: 3/12/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	8	6	3	0	Gritty limestone
8	6	25	6	4	0	Pale pink to pale brown dolomite, somewhat leached with solution cavities and generally softer at 8'6" - 14'3".
25	6	41	0	14	0	Off white moderately hard, porous, shelly, bryozoal limestone.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
	0	25	6	36.3	13.8	4.07	0.42
25	6	41	0	50.8	4.20	0.28	0.12

Bore logged by R.K. Johns

Date 7/12/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y4 BORE SER. NO. DD: 59/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 267

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 15/11/62 DATE DRILLING COMPLETED: 16/11/6

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	5	0	2	4	Travertinized yellow brown dolomitic limestone.
5	0	10	7	3	3	Off white to pale yellow brown dolomitic limestone.
10	7	13	3	2	7	Yellow brown hard dolomite.
13	3	18	0	4	6	Hard fairly dense buff dolomite
18	0	20	7	0	2	Soft limestone with thin band of hard buff dolomite.
20	7	21	5	0	5	Hard grey dolomitic limestone.
21	5	24	9	3	2	Hard grey dense dolomitic limestone.
24	9	28	8	2	2	Hard pale pink passing down into soft powdery yellow and brown dolomite.
28	8	33	6	3	10	Yellow brown and pink porous dolomite.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
0	0	5	0	42.7	7.60	5.30	0.87
5	0	33	6	42.7	10.9	0.41	0.20

Bore logged by R.K Johns

Date 23/11/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURING CO. D.M. 1140/62

BORE NO.: X5 BORE SER. NO. DD: 65/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 278

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 29/11/62 DATE DRILLING COMPLETED: 30/11/

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	5	0	3	0	Gritty brown clay
5	0	15	6	5	8	Pale yellow brown hard dolomitic limestone (with pockets of unreplaced bryozoal limestone)
15	6	19	0	1	6	Sugary off white dolomitic limestone
19	0	42	0	18	0	Moderately hard white porous bryozoal limestone - dolomitized at 29'6" - 33'0".

~~3 6 25 0~~
~~25 0 50 0~~

5	0	15	6
15	6	19	0
19	0	29	6
29	6	33	0
33	0	42	0

Partial Chemical Analyses

CaO	MgO	SiO_2	Fe_2O_3
~~54.7~~	~~0.75~~	~~0.28~~	~~0.19~~
~~53.0~~	~~2.33~~	0.24	0.25
~~54.3~~	~~1.10~~	~~0.14~~	~~0.16~~
44.3	9.40	0.44	0.27
41.0	11.20	1.56	0.28
52.5	2.46	0.32	0.17
35.2	16.9	057	0.17
49.7	4.92	0.26	0.15

Bore logged by R. K. Johns

Date 5/12/62

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M. 1140/62

BORE NO.: Y5 BORE SER. NO. DD 60/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 275

BEARING: DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 16/11/62 DATE DRILLING COMPLETED: 19/11/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	5	0	2	6	Yellow brown dolomite
5	0	8	0	2	5	Yellow brown and pink dolomite
8	0	11	10	2	0	" " dolomite
11	10	13	7	0	4	Porous yellow brown dolomitic limestone
13	7	15	10	1	6	Porous yellow brown dolomitic limestone
15	10	17	6	1	8	Hard fairly dense pale pink dolomite
17	6	22	0	4	0	Pale pink porous dolomitic limestone, hard.
22	0	26	4	4	0	Brown to pale yellow dolomitic limestone.
26	4	27	6	1	2	Yellow bryozoal limestone.
27	6	29	6	1	6	Off white dolomite (porous).
29	6	34	0	1	2	" " " "
34	0	37	9	2	8	Yellow brown porous dolomite.
37	9	43	0	2	9	Yellow brown and pink moderately hard dolomite.
43	0	48	0	4	2	Brown to pink dolomite.

33 10

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
	0	26	4	39.9	12.9	0.39	0.32
26	4	27	6	54.0	1.10	0.24	0.47
27	6	48	0	36.4	16.2	0.20	0.21

Bore logged by R.K. Johns

Date 23/11/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X6 BORE SER. NO. DD: 66/6

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 273

BEARING: DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 28/11/62 DATE DRILLING COMPLETED: 29/11/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	10	6	3	0	Yellow brown fine sand
10	6	43	0	25	0	Porous off white to pale yellow bryozoal limestone.
43	0	48	10	4	0	Yellow-brown hard to soft dolomitic limestone.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
10	6	43	0	51.9	5.20	0.28	0.20
43	0	48	10	45.4	8.83	0.24	0.23

Bore logged by R. K. Johns

Date 5/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y6 BORE SER. NO. DD 61/6

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 283

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 20/11/62 DATE DRILLING COMPLETED: 21/11/6

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	9	9	4	3	Gritty limestone with shells and cobbles and boulders of dolomite.
9	9	11	0	0	8	Travertinized dolomitic limestone.
11	0	13	10	2	6	Hard dense grey dolomitic limestone with softer intercalations.
13	10	16	0	1	8	Pale yellow dolomitic limestone
16	0	19	6	0	11	Pale yellow brown, leached dolomitic limestone
19	6	22	0	1	8	Yellow brown dolomitic limestone with solution cavities.
22	0	24	6	1	5	Yellow and brown generally soft sugary dolomitic limestone.
24	6	26	8	1	8	Yellow and brown leached dolomitized limestone.
26	8	31	0	2	8	Yellow brown porous dolomitized limestone
31	0	35	0	2	10	Pale yellow porous shelly dolomitized limestone
35	0	39	6	2	9	Yellow brown dolomitized limestone
39	6	44	6	2	8	Yellow brown dolomitized limestone.
44	6	49	6	5	0	Yellow brown dolomitized limestone.

7 30 8

Partial Chemical Analyses

		CaO	MgO	SiO_2	Fe_2O_3
9	9	48.4	5.98	0.44	0.23
26	8	39.8	13.4	0.31	0.26
49	6				

Bore logged by R. K Johns

Date 23/11/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Z7 BORE SER. NO. DD: 81/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 286

DEPRESSED: VERTICAL DRILLER: T. Jarvis

DATE DRILLING COMMENCED: 10/12/62 DATE DRILLING COMPLETED: 10/12/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	2	0	1	0	Red brown sandy clay
2	0	8	6	3	0	Gritty limestone
8	6	12	3	3	9	Weathered soft green brown limestone
12	3	15	0	2	6	Yellow brown loosely cemented to hard dolomitic limestone
15	0	17	0	2	0	Bryozoal limestone
17	0	34	2	13	0	Yellow brown generally porous dolomite
34	2	43	6	8	0	Hard fairly dense pale pink dolomite

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
12	3	15	0	43.6	8.03	2.05	0.68
15	0	17	0	52.3	2.80	0.31	0.16
17	0	43	6	37.7	15.1	0.22	0.35

Bore logged by R.K. Johns

Date 18/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: X7 BORE SER. NO. DD:67/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 264

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 27/11/62 DATE DRILLING COMPLETED:27/11/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
0		44	0	34	6	Offwhite and pale yellow in part porous bryozoal limestone.

Partial Chemical Analysis

	CaO	MgO	SiO_2	Fe_2O_3
0 44 0	54.3	1.10	0.14	0.16

Bore logged by R.K. Johns

Date 5/12/60

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: Y7 BORE SER. NO. DD: 61/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 282

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 21/11/62 DATE DRILLING COMPLETED: 22/11/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	1	6	0	6	Kunkar
1	6	5	0	0	6	Gritty brown clay
5	0	8	0	3	0	Brown clay
8	0	11	6	0	6	Brown limey clay
11	6	14	6	2	6	Hard buff dolomitic limestone
14	6	27	0	10	0	Soft white, porous dolomitic bryozoal limestone.
27	0	46	0	11	6	Unconsolidated white powdery dolomitized limestone
46	0	50	0	3	6	Yellow brown and white dolomite.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3	
11	6	14	6	53.5	6.15	1.88	0.32	✓
14	6	27	0	55.0	5.25	0.36	0.17	✓
27	0	46	0	44.6	8.83	1.02	0.25	
46	0	50	0	36.4	16.1	0.70	0.25	

Bore logged by R. K. Johns

Date 5/12/60

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M.: 1140/62

BORE NO.: XS BORE SER. NO. DD: 68/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 262

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 26/11/62 DATE DRILLING COMPLETED: 26/11/6

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	3	6	0	6	Fine brown sand, offwhite to pale yellow and in part pink.
3	6	50	0	35	6	Bryozoal limestone - generally soft with thin somewhat harder bands

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
3	6	25	0	54.7	0.75	0.28	0.19
25	0	50	0	53.0	2.33	0.24	0.25

Bore logged by R.K. Johns

Date 5/12/62

DEPARTMENT OF MINES,
ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M. 1140/62

BORE NO.: Y8 BORE SER. NO. DD 63/63

HUNDRED: HINDMARSH SECTION 200 R.L. OF COLLAR: 276

BEARING DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 22/11/62 DATE DRILLING COMPLETED: 23/11/62

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	5	0	nil		No core
5	0	7	10	1	6	Weathered soft limestone
7	10	10	6	1	0	Hard fairly dense buff limestone.
10	6	50	0	19	0	White bryozoal limestone with hard bar at 37'0" - 37'7".

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
7	10	10	6	49.8	4.45	0.46	0.20
10	6	37	0	52.4	2.40	0.15	0.16
37	0	37	7	55.1	0.31	0.22	0.15
37	7	50	0	53.0	2.25	0.27	0.15

Bore logged by R. K. Johns

Date 5/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: AUSTRALIAN GLASS MANUFACTURERS LTD. D.M. 1140/62

BORE NO.: Z8 BORE SER. NO. DD 82/63

HUNDRED: HINDMARSH SECTION: 200 R.L. OF COLLAR: 284

BEARING: DEPRESSED: VERTICAL DRILLER: T. JARVIS

DATE DRILLING COMMENCED: 11/12/62 DATE DRILLING COMPLETED: 11/12/62

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	9	0	3	0	Gritty and shelly limestone
9	0	14	2	2	0	Weathered dolomite
14	2	29	0	10	9	Moderately strongly cemented to hard grey and yellow dolomitized limestone, leached throughout.
29	0	49	0	15	0	Brown and yellow porous hard dolomite with cavity at 34'6" - 37'0".

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
14	2	29	0	43.2	10.0	0.72	0.36
29	0	49	0	34.3	18.1	0.34	0.49

Bore Logged by R. K Johns

Date 18/12/62.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.

BORE NO.: A.C.2. BORE SER. NO. DD: 100/49

HUNDRED: HINDMARSH SECTION: 200

BEARING DEPRESSED: VERTICAL DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 6/9/49 DATE DRILLING COMPLETED: 9/9/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	9	0			Siliceous, gritty and shelly limestones.
9	0	47	0			Generally hard yellow brown and pink, somewhat leached dolomite.
47	0	72	6			Pink, yellow and brown moderately hard dolomite.
72	6	80	4			Soft sugary dolomite.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3	
	0	9	0	46.1	0.7	14.5	0.30	✓
9	0	47	0	34.7	16.9	1.10	0.67	✓
47	0	80	4	33.3	18.5	0.28	0.94	✓

Bore logged by G.W. Cochrane

Date 6/12/49.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: A.D.2 BORE SER. NO. DD: 93/49

HUNDRED: HINDMARSH SECTION: Pt.205

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 14/9/49 DATE DRILLING COMPLETED: 16/9/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	5	0			Fine shelly, sandy limestone
5	0	65	0			Generally hard lightpink and yellow brown dolomite with thin soft bands of sugary textured dolomite.
65	0	87	0			Pink, brown and yellow generally soft dolomitized limestone.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3	
	0	8	0	33.9	12.9	9.52	0.40	✓
8	0	65	0	34.5	17.7	0.25	0.67	✓
65	0	87	0	40.4	12.4	0.62	0.70	✓

34 - 18
30 - 5

Bore logged by G.W. Cochrane

Date 6/12/49.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.

BORE NO.: A.D.15 BORE SER. NO. DD: 98/49

HUNDRED: HINDMARSH SECTION: Pt. 205

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 4/10/49 DATE DRILLING COMPLETED: 7/10/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	4	0			No core
4	0	40	0			Dominantly hard pink dolomite
40	0	51	5			Fairly soft, porous pink brown and yellow somewhat sugary dolomite.
51	5	55	8			Bryozoal limestone

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
	0	51	5	34.1	17.5	0.23	1.32
51	5	55	8	54.0	0.08	1.33	0.95

34-18

Bore logged by G.W. Cochrane

Date 6/12/49

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.

BORE NO.: A.E.2 BORE SERIAL NO. DD:94/49

HUNDRED: HINDMARSH SECTION: PT. 205

BEARING DEPRESSER: VERTICAL DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 19/9/49 DATE DRILLING COMPLETED: 22/9/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	37	0			Hard massive pink dolomite
37	0	39	0			Soft yellow brown granular dolomite
39	0	59	0			Hard massive pink to pale pink dolomite
59	0	60	0			Soft sugary yellow brown dolomite.
60	0	74	2			Moderately hard to soft pink and yellow somewhat sugary dolomite.

Partial Chemical Analyses

		CaO	MgO	SiO_2	Fe_2O_3
	0 59 0	33.3	18.5	0.42	0.91
59	0 74 2	35.9	15.9	0.62	0.95

Bore logged by G.W. Cochrane

Date 6/12/49.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: A3 BORE SER. NO. DD: 67/49

HUNDRED: HINDMARSH SECTION: PT. 205

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 24/8/49 DATE DRILLING COMPLETED: 26/8/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	42	0			Generally hard pink dolomite, somewhat porous; yellowish brown at 29-35'.
42	0	45	6			Soft sugary yellow, brown and pink dolomite.
45	6	50	0			Hard pink dolomite
50	0	64	0			Pink, brown and yellow soft sugary and granular dolomite.
64	0	64	2			Bryozoal limestone.

Partial Chemical Analyses

				CaO	MgO	SiO_2	Fe_2O_3
	0	50	0	33.3	17.5	0.37	1.80
50	0	64	0	37.7	14.0	0.89	1.50

Bore logged by G.W. Cochrane

Date 5/12/49

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: A.E.1. BORE SER. NO. DD: 97/49

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 29/9/49 DATE DRILLING COMPLETED: 4/10/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	46	7			Dominantly hard massive pink and yellow brown dolomite.
46	7	54	5			Sugary yellow, brown dolomite.

Partial Chemical Analyses

	CaO	MgO	SiO_2	Fe_2O_3
0 54 5	33.6	17.9	0.29	1.60

Bore logged by G.W. Cochrane

Date 6/12/49

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: AF2 BORE SER. NO. DD: 95/49

HUNDRED: HINDMARSH SECTION: PT. 205

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 23/9/49 DATE DRILLING COMPLETED: 26/9/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	27	0			Hard massive pink dolomite
27	0	53	0			Pink dolomite, dominantly hard.
53	0	63	6			Pink and yellow soft granular dolomite.

Partial Chemical Analysis

	CaO	MgO	SiO_2	Fe_2O_3
0 – 63 6	33.3	17.9	0.22	1.42

Bore logged by G.W. Cochrane

Date 6/12/49

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: A4 BORE SERIAL NO. DD: 81/49

HUNDRED: HINDMARSH SECTION: PT.205

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 29/8/49 DATE DRILLING COMPLETED: 31/8/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	3	0			No core
3	0	27	0			Pink dolomite
27	0	28	0			Pink dolomite with thin soft shelly bands
28	0	45	0			Pink somewhat porous dolomite
45	0	53	0			Red dolomite, softer and more porous than above.
53	0	67	6			Soft porous yellow brown and red dolomite.

Partial Chemical Analysis

				CaO	MgO	SiO_2	Fe_2O_3
	0	45	0	33.1	18.3	0.32	1.38
45	0	59	5	37.3	14.7	0.44	1.33

Bore logged by G.W. Cochrane

Date 6/12/49

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: A.F.1. BORE SER. NO. DD.: 99/49

HUNDRED: HINDMARSH SECTION: PT.205

BEARING DEPRESSED: 90° DRILLER W. DUCROW

DATE DRILLING COMMENCED: 2/9/49 DATE DRILLING COMPLETED: 39/49

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
	0	5	0			Hard massive pale pink dolomite
5	0	13	0			Cavity
13	0	38	0			Light yellow brown and pale pink hard dolomite, with thin softer, porous bands.
38	0	44	0			Yellow brown dolomite
44	0	44	6			Hard yellow fossiliferous dolomite.
44	6	48	7			Bryozoal limestone

Partial Chemical Analysis

		CaO	MgO	SiO_2	Fe_2O_3
	0 44 0	35.1	17.0	0.24	0.93
44	0 48 7	54.2	0.5	0.59	0.61

Bore logged by G.W. Cochrane

Date 5/12/49

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

PROJECT: S.A.R. D.M.:

BORE NO.: A5 BORE SER. NO. DD: 96/49

HUNDRED: HINDMARSH SECTION: Pt.205

BEARING DEPRESSED: 90° DRILLER: W. DUCROW

DATE DRILLING COMMENCED: 27/9/49 DATE DRILLING COMPLETED: 28/9/49

LOG

Depth From Ft.	In.	To Ft.	In.	Core Recovered Ft.	In.	
	0	15	0			Hard pink dolomite
15	0	18	0			Hard yellow brown dolomite, softer at 17 ft. - 17 ft. 6 ins.
18	0	46	0			Uniformly hard pink dolomite. Porosity variable.
46	0	52	6			Fairly soft yellow brown dolomite
52	6	55	0			Fairly hard yellow dolomite becoming soft.
55	0	57	7			Yellow dolomitised bryozoal limestone

Partial Chemical Analysis

				CaO	MgO	SiO_2	Fe_2O_3
	0	52	6	32.8	18.6	0.29	1.35
52	6	57	7	47.7	5.9	0.51	1.04

Bore logged by G.W. Cochrane

Date 6/12/49

£3.5 an ac

LEGEND

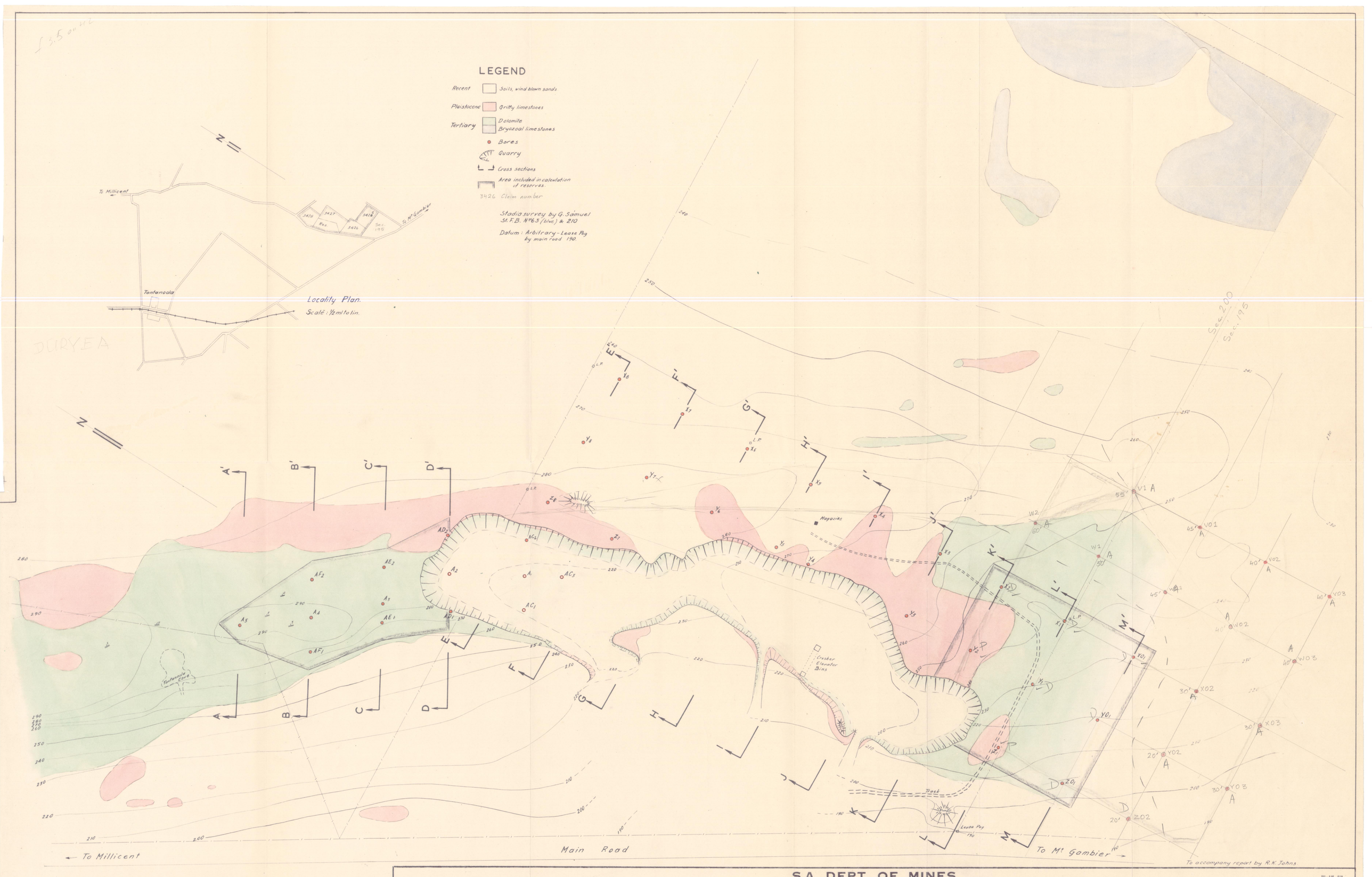
Recent		Soils, wind blown sands
Pleistocene		Gritty limestones
Tertiary		Dolomite
		Bryozoal limestones

- Bores
- Quarry
- Cross sections
- Area included in calculation of reserves.
- 3426 Claim number

Stadia survey by G. Samuel
St. F.B. N°63 (blue) & 210

Datum: Arbitrary - Lease Peg by main road 190.

Locality Plan.
Scale: ½ ml to 1 in.



To accompany report by R.K. Johns

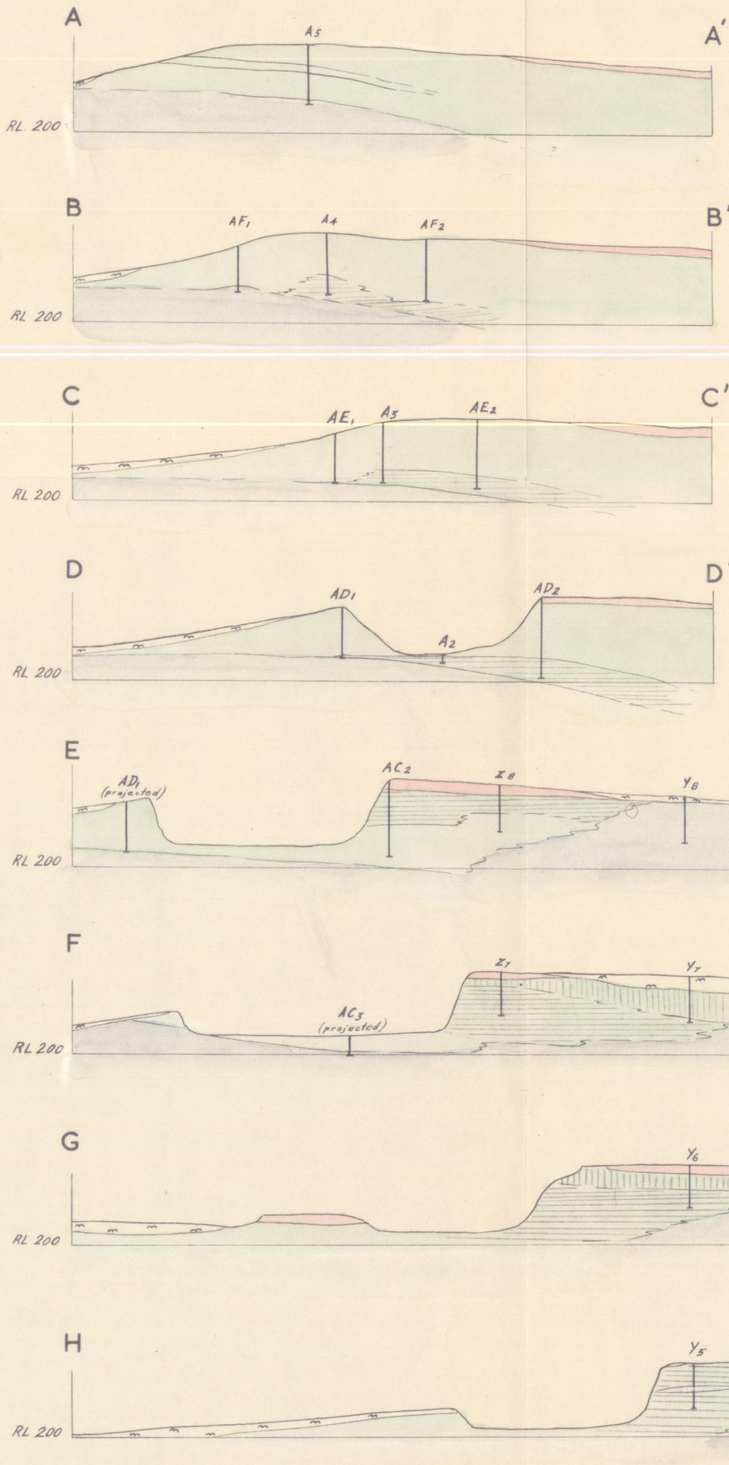
S.A. DEPT. OF MINES

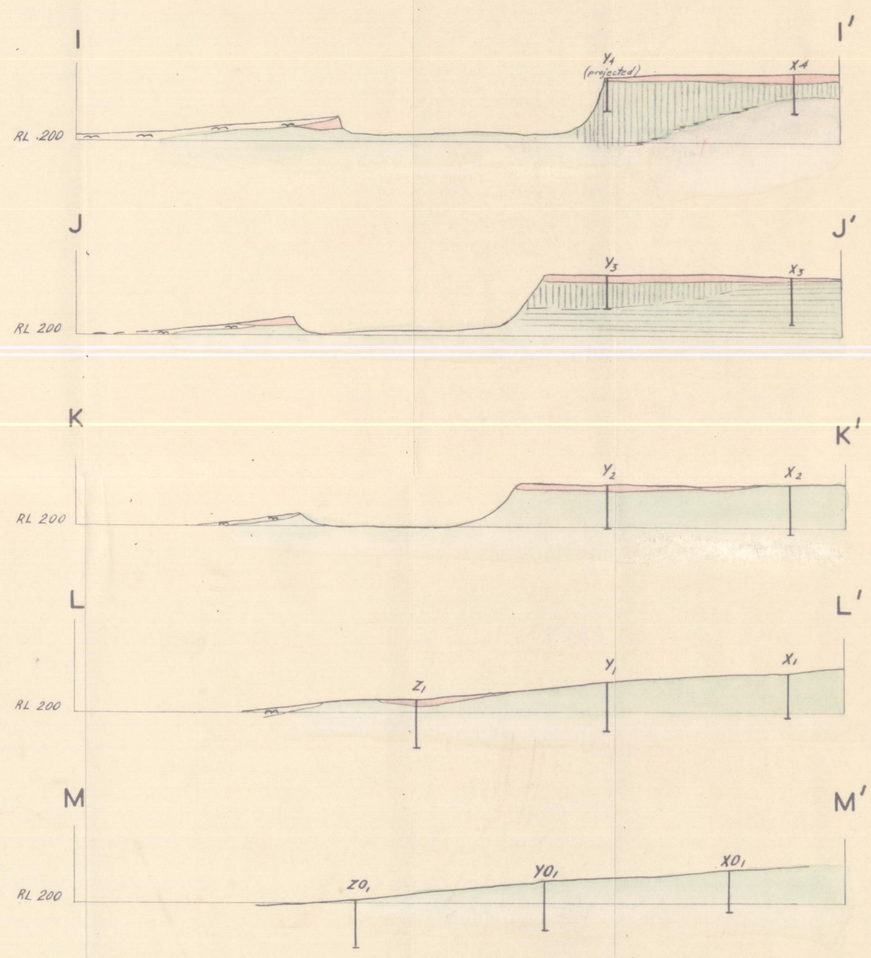
TANTANOOLA DOLOMITE DEPOSIT - UP AND DOWN ROCKS

GEOLOGICAL PLAN

Req. No.	Approved	Passed		Scale: 100ft to 1 in	
D.M.			Drn. G.S.	63 - 71	
Compiled from			Tcd. G.S.	Kd 13	
	Director of Mines		Ckd.	Date 22 - 2 - 63	
			Exd.		

Associated Drawing	No.	No.	Amendment	Exd.	Date





LEGEND

Recent — Soils

Pleistocene — Gritty limestones

Tertiary — Dolomitized Limestone:
- Over 17% MgO
- 12-17% MgO
- 5-12% MgO

Bryozoal limestone — < 5% MgO

17.4

To accompany report by R.K. Johns.

S.A. DEPT. OF MINES

200—10.57 6967

TANTANOOLA DOLOMITE DEPOSIT — UP AND DOWN ROCKS

CROSS SECTIONS

Req. No.
D.M.
Compiled from

Associated Drawing	No.	No.	Amendment	Exd.	Date

Approved	Passed		Scales. Horiz & Vert.: 100ft to 1 in
		Drn. R.K.J.	63-72
		Tcd. G.S.	Kd 13
Director of Mines		Ckd.	Date 21-2-63
		Exd.	