

MICROFILMED

M. H. A.

FINAL REPORT

EL 3/80

81-1649.



FINAL REPORT ON EXPLORATION LICENCE NO. 3/80

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1. INTRODUCTION

Mineral Holdings Australia Pty. Ltd. became interested in the Dan Rivulet Goldfield early in the year 1969, and particularly in M.L. 51M/72 and E.L. 31/76 which surrounds M.L. 51/M/72. Both tenements were held by H.G. Rayner, C.W. Benter and J. Cubit. Later in the year, Mineral Holdings and the holders of the Licence and Lease entered into an agreement and both Licence and Lease were transferred to Mineral Holdings Australia.

On 18th January 1980, Mineral Holdings Australia applied for an Exploration Licence abutting the southern boundary of E.L. 31/76 and extending to the south and south-east and with its southern boundary abutting E.L. 17/78.

Mineral Holdings was granted E.L. 3/80 as from 24th June 1980, but it was extended to 1st January 1981. An extension was granted as from 1st January 1981. A further application (for the period from 2nd July 1981) was made but refused because the programme submitted was not acceptable to the Department of Mines, and Mineral Holdings therefore cancelled its application.

2. LIST OF PREVIOUS REPORTS ON E.L. 3/80

The following list includes reports on the Dan Rivulet Goldfield and reports (mainly typewritten) on individual mines in E.L. 3/80. There may be some reports on other fields, but including some of the mine workings in E.L. 3/80, but such reports are not included.

Report on the Mt. Victoria, Dan Rivulet, Black Boy and Mangana Goldfields - G. Thureau, 1884.

Report on South Mount Victoria Fields - W.H. Twelvetrees, 1904.

Departmental Report on Recent Prospecting Operations in the Vicinity of Lady Havelock and Larundah Mines - Q.J. Henderson 29/7/36.

City of Melbourne Mine, Mathinna - P.B. Nye, 17/9/41.

The Dan Rivulet Goldfield, T.D. Hughes, 9/9/47.

Gold Deposits of Tasmania, Geology of Australia ore deposits, Eight Commonwealth Mining and Metallurgical Congress 1965, p.p.518-521 - A.J. Noldart and V.M. Threader.

The Geology of the Mangana - Waterhouse Goldfields, M.S. Thesis Department of Mines, Tasmania - V.M. Threader, 1967.

The following report was prepared during the holding of E.L. 3/80 by Mineral Holdings -

Report on Exploration and Investigation in Exploration Licence 3/80, North Eastern Tasmania by P.B. Nye, 18/12/80.

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3. HISTORY OF THE DAN RIVULET GOLDFIELD

The Dan Rivulet Goldfield was apparently discovered after the neighbouring fields of Mathinna (Black Boy), Mount Victoria and Alberton (or New River). In 1884, G. Thureau travelled from the Mount Victoria to the Black Boy goldfield and in passing down the Dan Rivulet Valley referred to Kerrigan's Discovery. This prospect later became the O'Brien mine and the first leases on it were granted in 1884. However, in the south-western part of E.L. 3/80 there are two mines which are now regarded as being in the Dan Rivulet field, but were probably regarded as being in the Mathinna field. The two mines are City of Melbourne and True Blue on which the first leases were granted in 1872.

The mines or workings in E.L. 3/80 and the year in which leases were first granted on them are given in the following Table No. 1. The information was obtained from the 1947 report of T.D. Hughes.

TABLE 1
LIST OF MINES WORKINGS

<u>Mine Workings</u>	<u>Year of First Lease</u>	<u>Mine Workings</u>	<u>Year of First Lease</u>
Golden Horseshoe	1895	Bright Star	1888
City of Melbourne	1892	New Golden King	1901
True Blue Leases 819 + 821/939	1872	Waterfall	1903
Lady Mary	1888	October	1897
Heaton (or Eton)	1895	Mabel	1896
King Solomon	1896	Revenue	1897

4. THE MINE WORKINGS

A list of the old mine workings is given in Section C of this Report. The list shows also the year in which the mining first lease was granted. The workings are therefore old and most of them were shallow. Some of the workings have collapsed, and some have been filled in, and many of them cannot be examined.

T.D. Hughes in his 1947 report gave descriptions of the workings that were available for inspection and also obtained information from the plans submitted to the Department of Mines. In his 1967 report, V.M. Threader made use of all information available to that year and prepared a Summary of the Workings in the goldfields that he examined.

A copy of the Summary has been extracted from the Summary for the mines on E.L. 3/80 in part of the Dan Rivulet Goldfield, and is attached to this report as an appendix (TABLE 4).

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5. PRODUCTION

Details of the production were given in the 1947 report of T.D. Hughes and the 1967 report of V.M. Threader. In his report of 1980, the writer included the information in his Tables 1 and 2 and copies of those two tables are included in this report as Tables 2 and 3. Figures in Table 3 are the most complete and show production from five mines (Revenue, Mabel, Golden Horseshoe, City of Melbourne and New Golden King). The total production of gold was 1274.70 ounces from 4248 tons of ore and 260 tons of sand. The production was between 1898 and 1910, and there has therefore been no production for more than 70 years. The largest producer was the New Golden King Mine with 737 tons.

837 oz?

TABLE 2

PRODUCTION FIGURES OBTAINED FROM V.M. THREADER'S REPORT OF 1967

<u>Name</u>	<u>Latest Lease</u>	<u>Production Ounces</u>
Revenue	100G -101G	-
Maple	1213/93G	38
October	1304/1084/93G	-
Bright Star	1087/1088/93G	-
King Solomon	605/606/93G	-
Heaton (now Eaton)	773/G	-
Lady Mary	512/513/93G	-
True Blue	808/93G	-
Golden Horseshoe	704/G	224
City of Melbourne	350/G	88.5
Leases 819 + 821/93G	819 to 822/93G	-
New Golden King	310/G	593
Waterfall	325/327/G	-

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TABLE 3

PRODUCTION FIGURES OBTAINED FROM T.G. HUGHES' REPORT OF 9/9/47

NAME OF MINE	YEAR	QUARTER	ORE CRUSHED TONS	GOLD PRODUCED OUNCES	REMARKS
<u>REVENUE</u> First leased in 1897	1902		18	23.55	Trial crushing from surface working.
	1902	EC	50	14.	
	1903	MARCH	84	16	
	1903	JUNE	150	24	
	1903	SEPT	109	21	
	1903	DEC	-	6	
			411	104	
<u>MABEL</u> First held in 1896	1898		96	38	Trial crushing underfoot 100ft level
	1900		22	38.65	
			118	76.65	
<u>GOLDEN HORSESHOE</u> First taken up in 1895	1910		1604	144	From surface working
<u>CITY OF MELBOURNE</u> First taken up in 1872	1905	SEPT	13	22	
	1906	JUNE	25	6.5	
<u>NEW GOLDEN KING</u> First applied for in 1901	1902		264 (ore)	244	
			260 (sand)		
	1903		1350	593	
<u>TOTAL</u>		ORE	4248	1274.70	
		SAND	260		

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6. THE REEFS

The gold deposits are quartz reefs occupying planes of foliation, bedding, jointing and perhaps faulting. The reefs contain sulphide minerals in varying amounts that are generally low. The minerals are arsenopyrite, pyrite, chalopyrite, sphalerite and galena, and the most abundant are the pyrite and assemphyrite. The literature makes little reference to an oxidised zone, but it is possible that most of the production was from the oxidised zone.

Table 4 (which is an appendix to this report gives some information about the strike, dip, width, length and grade of the reefs in the old mine workings).

7. EXPLORATION

7.1 GENERAL

The information given earlier in this report shows the field has been known for a long time. Much prospecting and some mining have been done in that time. Parts of the field were discovered as early as 1872 and the greater part since 1884. No alluvial mining appears to have been conducted and there is no record of production of alluvial gold.

There are 13 groups of mine working and production came from only five of them. Production was small (1274.7 ounces of gold) and there has not been any production since 1910.

Some of the old mine workings have collapsed and some have been filled in as the area is now being developed as a forestry one.

It is probable that previous prospecting has revealed most, if not all, of the outcropping quartz reefs, and surface prospecting is not likely to produce any favourable results. Some information can be obtained from shallow workings that have not collapsed and further information could be obtained if the workings were cleaned out and retained. Much reliance has however to be placed on information obtained and described before the workings collapsed. Some information about the old workings is given in Table 4; the information was taken from V.M. Threader's report of 1967.

7.2 BY MINERAL HOLDINGS

Mineral Holdings conducted considerable surface prospecting and sampling. It was devoted mainly to :

- i) reef exposures in road cuttings and in other places where bull dozers had been working;
- ii) in old workings not collapsed and some of those which were cleaned out and repaired; and
- iii) some ore dumps.

The prospecting was carried out by Mr. H. Rayner.

Twenty six samples were taken from old workings and 29 from quartz reefs in sand cuttings and bull dozer cuts. The samples were analysed by the Department of Mines laboratory in Launceston. The results of the analyses are given in Table 5 attached. Of the 28 samples analysed for gold only 10 were above 1.0 grams/tonne, only 5 were above 3.0 grams/tonne and only 4 were above 5.0 grams/tonne. Of 29 samples from road cuttings etc., the highest grade was 0.3 grams/tonne and the remainder were all below 0.3 grams/tonne.

7.3 BY A.C.A. HOWE AUSTRALIA PTY. LTD. FOR STURTS MEADOWS PROSPECTING SYNDICATE N.L.

This syndicate entered into a joint venture with Mineral Holdings, and investigations from December 1979 to April 1980 were carried out. After this preliminary exploration and investigations the whole of the Dan Rivulet field (E.L. 31/76 and E.L. 3/80) the Syndicates selected mine workings and areas for further investigation and testing, but they were all within the Licence area of 31/76.

No areas in E.L. 3/80 were selected for testing of alluvial deposits.

The A.C.A. Howe report was completed on 31st May 1980. Although the joint venture agreement extended to December 1980, the Syndicate made no arrangements for any further exploration or testing.

7.4 BY J. HEGGIE

Mr. Heggie took a composite sample from five locations on a tailing dump at the New Golden King mine.

8. GENERAL CONCLUSIONS

The exploration by Mineral Holdings Australia consisted of :

- i) sampling of quartz reef exposed in recent road cuttings and other excavations by bulldozers; and
- ii) sampling of quartz reefs in old mine workings and of small dumps of ore at a few of the workings.

Very few of the samples yielded gold bearing quartz or ore grade. The ACA Howe Company conducted investigations for the Sturts Meadows Syndicate (which had a joint venture with MHA) in the Dan Rivulet Goldfield, but selected for further inspection only a few of the old mines in part of E.L. 31/76.

The above information indicates that the part of the Dan Rivulet Goldfield in E.L. 3/80 is not likely to yield favourable results for exploration on it.

P.B. NYE

TABLE 4

APPENDIX

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Goldfield	No. Reef		Summary of Mine Workings	Strike	Dip	Reef Details		Grade		Remarks
	No.	Name				Width ft. in.	Length ft.	oz.	dwt/ton	
	13	Revenue	200ft. adit and shallow shafts and trenches	045	78NW	2	-	-	-	-
	14	Sections 819 + 821/936	70ft. adit and trenches	-	-	-	-	-	-	-
	15	Mabel (Dans Reward)	100ft. inclined shaft	140	85NE	-	-	-	8	38oz. output
	16	October	84ft. shaft, 2 inclined shafts and trenches	055 360	80NW 70W	2 5	- -	17 to 20 dwt/ton	- -	- -
	17	Waterfall	260ft. adit, inclined shaft, shallow shaft and surface slope.	008 075	80E 80N	4in to 9in -	- -	- -	- -	- -
	18	Bright Star	40ft. adit, inclined shaft and trenches	090 360 060	- - 30E	- - -	- - -	- - -	- - -	- - -
	19	King Solomon	4 shallow vertical shafts	035	80NW	-	3	-	-	-
	20	Heaton	Main Shaft several shallow shafts and surface slopes	090	70 (2 parallel veins)	-	-	-	-	-
	21	Lady Mary	105ft. shaft and several shallow shafts and surface slopes.	045	75E(3 sub parallel veins)	-	-	-	-	-
	22	Golden Horse-shoe	110ft. shaft with 40ft. crosscut, 80ft. shaft and 60ft. adit	090 "	60N Vert	- -	3 4	- -	- -	224oz. output -
	23	True Blue	45ft. inclined shaft and shallow vertical shaft	090	80S	-	-	-	-	-
	24	City of Melbourne	5 shafts with some reef drives	045 090	70S 70S	- -	- -	- -	- 15	- 88.5oz. output
	25	New Golden King	192ft. shaft with 2 levels and 3 adits	360	70W	3in to 5ft	-	-	9	593oz. output

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APPENDIX

Name of Working Locality etc.	Sample from	Width of Sample inches	MHA's Sample No.	Registered Laboratory Number	ASSAY	
					Gold gram/tonne	Silver gram/tonne
<u>OLD-MINE WORKINGS</u>						
M Revenue area	Quartz vein	1	R.1	801977	<0.3	<3
	" "	24	R.2	- 978	<0.3	<3
	" "	1	R.3	- 979	0.8	<3
	Quartz vein blow)	60	R.4	- 980	<0.3	<3
	)		R.5	- 981	<0.3	<3
	Quartz vein	2	R.6	- 982	1.0	<3
		2	R.7	- 983	2.4	<3
Mabel			Mabel	801878	12.0	8
October			October	801875	1.9	<3
			October			
			West No. 1 -	6	0.4	<3
			October			
			West No. 2 -	7	0.4	4
Bright Star	Reef	10		801932	6.5	<3
King Solomon			K.S.1	801908	1.5	4
			K.S.2	- 9		<3
Heaton (or Eton)						
Lady Mary						
True Blue			1	801924	<0.3	<3
			2	- 5	2.7	<3
			3	- 6	8.0	<3
Golden Horseshoe						
Leases 819 + 821/93G						
New Golden King)			1	801172	1.20	3.60
)			2	- 3	3.70	<1.00
)			3	- 4	<0.30	<1.00
Prospect Shaft			4	- 5	2.00	<1.00
Waterfall	No. 1 adit			801176	<0.30	<1.00
	No. 2 adit			77	<0.30	<1.00
	No. 3 adit			78	<0.30	1.80
	No. 1 shaft			79	0.95	<1.00
	No. 2 shaft			80	11.10	1.80

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ALONG ROAD CUTTINGS ETC.

Along Weisk		10	1 H	801920	0.3	<3
Road		6	2 H	11	<0.3	<3
		12	3 H	12	<0.3	6
		15	4 H	13	<0.3	<3
		24	5 H	14	<0.3	<3
		9	6 H	15	<0.3	<3
		24	7 H	16	<0.3	<3
		6	8 H	17	<0.3	<3
		12	9 H	18	<0.3	<3
		10	10 H	801930	<0.3	4
		14	11 H	19	<0.3	<3
		9	12 H	20	<0.3	<3
		8	13 H	21	<0.3	<3
		16	14 H	22	<0.3	<3
		30	15 H	23	<0.3	<3
Narrow Link)		24	1	801928	<0.3	<3
)		6	4 AH	29	<0.3	<3
Fire Break		6	1	31	<0.3	<3
City of	ironstone	36	C.1	801927	<0.3	<3
Salbourne Creek	lode reef	9	CMC1	801933	<0.3	<3
Along Dilger's	quartz vein	18	D.1	801984	<0.3	<3
Road	" "	30	D.2	- 85	<0.3	<3
	" "	12	D.3	- 86	<0.3	<3
(on spur	" "	18	D.4	87	<0.3	<3
between Dan	" "	10	D.5	88	<0.3	<3
Rivulet and	" "	6	D.6	89	<0.3	<3
Waterfall	" "	36	D.7	90	<0.3	<3
Creek)	" "	15	D.8	91	<0.3	<3
	" "	18	D.9	92	<0.3	<3

FIRST REPORT ON EXPLORATION AND INVESTIGATION IN EXPLORATION LICENCE 3/80
NORTH-EASTERN TASMANIA

This Licence covers the south-western, southern and eastern parts of the Dan Rivulet goldfield. It includes the southern part of the valley of the Dan Rivulet and its tributories. Its southern boundary is 3 miles to the north of the twonship of Mathinna.

It includes many gold prospects and old small gold-bearing quartz reefs. The following Table 1 shows the names of the prospects and mines, the numbers of the last mineral leases held and the total production from the few mines that produced gold. The names of the mines were obtained from old reports. The latest mineral leases were obtained from mineral charts and the report of T.D. Hughes of 9/9/47. The production figures were obtained from the list in Threader's report of 1967.

TABLE 1

Name	Latest Lease held	Production ounces
Revenue	100G-101G	
Mabel	1213/93G	38
October	1304/1084/93G	
Bright Star	1087/1088/93G	
King Solomon	605/606/93G	
Heaton (or Eton)	773/G	
Lady Mary	512/513/93G	
True Blue	808/93G	
Golden Horseshoe	704/G	224
City of Melbourne	350/G	88.5
Leases 819 & 821/93G	819 to 822/93G	
New Golden King	310 G	593
Waterfall	325 to 327/G	

The details of the production from the mines as taken from the report of T.D. Hughes (9/9/47) is given in Table 2 below.

TABLE 2
PRODUCTION

Name of Mine	Year	Quarter	Ore crushed tons	Gold producer ounces	Remarks
<u>Revenue</u> first leased in 1897	1902		18	23.55	Trial crushing from surface working
	1902	December	50	14	
	1903	March	84	16	
	"	June	150	24	
	"	September	109	21	
	"	December		6	
			411	104	
<u>Mabel</u> lease first held in 1896	1898		96	38	Trial crushing under- foot 100 feet level.
	1900		22	38.65	
<u>Golden Horseshoe</u> First taken up in 1895	1910		1604	144	From surface working
	Total		1807	224	

TABLE 2 cont.

City of Melbourne first taken up in 1872	1899			60
	1905	September	13	22
	1906	June	25	6.5
New Golden King first applied fro in 1901	1902		264 ore)	144
	1903		260 sand) 1350	593
Total		Ore (	4248	1274.70
		Sands (	260	

There are 14 prospects or mines in the Licence area. Much of the work on them was done in the 1880's, and 1900's, and the numbers of the last leases held show that not much work has been done since then. Some work would no doubt have been done on some of the prospects and mines under other mining tenements. Production is recorded for only five mines and the total is 1274.70 ounces. The largest producer was the New Golden King and one record gives the total as 493 ounces and the other as 1310 ounces (from 1614 tons).

Many of the old workings have collapsed or otherwise become inaccessible. Some information will be obtainable from those that can be entered and inspected, but much will have to be obtained from previous reports, maps, mine plans, etc. As prospecting has been carried out on the field for about 100 years, surface exploration is not likely to result in many discoveries, but will be done particularly in cuttings in recently constructed roads and in any other exposures.

Exploration

It was arranged that accessible mine workings would be visited by Mr. H. Rayner and that he would search road cuttings and other exposures for quartz reefs. The objective was to sample quartz reefs and any other mineral deposits and to send the samples to Department of Mines laboratory in Launceston for assay.

Twenty six samples were taken from old mine workings, and 29 from quartz reefs in road cuttings, bulldozer cuts, etc. The 29 samples were taken in the south-western part of the Licence area, and to the west of the Dan Rivulet.

The details are given in attached Table 3.

Details of Mine Workings

A summary of the mine workings is given in the attached Table 4 taken from the report by V.M. Threder of 1967.

Additional information, particularly of the reefs and their gold contents will be obtained as part of the programme for the coming Licence period.

MELBOURNE

18th December, 1980.

P.B. Nye
P.B. NYE

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TABLE 3

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Name of Working Locality etc.	Sample from	Width of sample Inches	MHA's Sample No.	Registered Laboratory Number	ASSAY	
					Gold gram/tonne	Silver gram/tonne
<u>OLD MINE WORKINGS</u>						
Revenue area	Quartz vein	1	R.1	801977	< 0.3	< 3
	" "	24	R.2	- 978	< 0.3	< 3
	" "	1	R.3	- 979	0.8	< 3
	Quartz vein blow)	60	R.4	- 980	< 0.3	< 3
	)		R.5	- 981	< 0.3	< 3
	Quartz vein	2	R.6	- 982	1.0	< 3
		2	R.7	- 983	2.4	< 3
Mabel			Mabel	801878	12.0	8
October			October	801875	1.9	< 3
			October West No.1	- 6	0.4	< 3
			October West No.2	- 7	0.4	4
Bright Star	Reef	10		801932	6.5	< 3
King Solomon			K.S.1	801908	1.5	4
			K.S.2	- 9		< 3
Heaton (or Eton)						
Lady Mary						
True Blue			1	801924	< 0.3	< 3
			2	- 5	2.7	< 3
			3	- 6	8.0	< 3
Golden Horseshoe						
Leases 819 + 821/93G						
New Golden King))) Prospect Shaft			1	801172	1.20	3.60
			2	- 3	3.70	< 1.00
			3	- 4	< 0.30	< 1.00
			4	- 5	2.00	< 1.00
Waterfall	No. 1 adit			801176	< 0.30	< 1.00
	No. 2 adit			77	< 0.30	< 1.00
	No. 3 adit			78	< 0.30	1.80
	No. 1 Shaft			79	0.95	< 1.00
	No. 2 Shaft			80	11.10	1.80
<u>ALONG ROAD CUTTINGS ETC.</u>						
Along Weise Road		10	1 H	801990	0.3	< 3
		6	2 H	11	< 0.3	< 3
		12	3 H	12	< 0.3	6
		15	4 H	13	< 0.3	< 3
		24	5 H	14	< 0.3	< 3
		9	6 H	15	< 0.3	< 3
		24	7 H	16	< 0.3	< 3
		6	8 H	17	< 0.3	< 3
		12	9 H	18	< 0.3	< 3
		10	10 H	801930	< 0.3	4
		14	11 H	19	< 0.3	< 3
		9	12 H	20	< 0.3	< 3
		8	13 H	21	< 0.3	< 3

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		16	14 H	22	<0.3	<3
		30	15 H	23	<0.3	<3
Narrow Link)		24	1	801928	<0.3	<3
)		6	4 AH	29	<0.3	<3
Fire Break		6	1	31	<0.3	<3
City of	ironstone	36	C.1	801927	<0.3	<3
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	" "	12	D.3	86	<0.3	<3
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between Dan	" "	10	D.5	88	<0.3	<3
Rivulet and	" "	6	D.6	89	<0.3	<3
Waterfall	" "	36	D.7	90	<0.3	<3
Creek)	" "	15	D.8	91	<0.3	<3
	" "	18	D.9	92	<0.3	<3

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Mineral Holdings Australia Pty. Ltd. became interested in the Dan Rivulet Goldfield early in the year 1969, and particularly in M.L. 51M/72 and E.L. 31/76 which surrounds M.L. 51M/72. Both tenements were held by H.G. Rayner, C.W. Benter and J. Cubit. Later in the year, Mineral Holdings and the holders of the licence and lease entered into an agreement and both licence and lease were transferred to Mineral Holdings Australia.

On 18th January 1980, Mineral Holdings Australia applied for an Exploration Licence abutting the northern boundary of E.L. 31/76 and extending to the south and south-east and with its southern boundary abutting E.L.17/78.

Mineral Holdings was granted E.L. 3/80 as from 24th June 1980, but it was extended to 1st January 1981. An extension was granted as from 1st January 1981. A further application (for the period from 2nd July 1981) was made but refused because the programme submitted was not acceptable to the Department of Mines, and Mineral Holdings therefore cancelled its application.

2. LIST OF PREVIOUS REPORTS ON E.L. 3/80

The following list includes reports on the Dan Rivulet Goldfield and reports (mainly typewritten) on individual mines in E.L. 3/80. There may be some reports on other fields, but including some of the mine workings in E.L. 3/80, but such reports are not included.

Report on the Mt. Victoria, Dan Rivulet, Black Boy and Mangana Goldfields - G. Thureau, 1884.

Report on South Mount Victoria Fields - W.H. Tavdoctree, 1904.

Departmental Report on Recent Prospecting Operations in the Vicinity of Lady Havelock and Larundah Mines - Q.J. Henderson 29/7/36.

City of Melbourne Mine, Mathinna - P.B.Nye, 17/9/41.

The Dan Rivulet Goldfield, T.D. Hughes, 9/9/47

Gold Deposits of Tasmania, Geology of Australian ore deposits, Eight Commonwealth Mining and Metallurgical Congress 1965, p.p.518-521 - A.J. Noldart and V.M. Threader.

The Geology of the Mungana - Waterhouse Goldfields, M.S. Thesis Department of Mines, Tasmania - V.M. Threader, 1967

The following report was prepared during the folding of E.L. 3/80 by Mineral Holdings -

Report on Exploration and Investigation in Exploration Licence 3/80, North Eastern Tasmania by P.B. Nye, 18/12/80.

3. HISTORY OF THE DAN RIVULET GOLDFIELD

The Dan Rivulet Goldfield was apparently discovered after the neighbouring fields of Mathinna (Black Boy), Mount Victoria and Atherton (or Neu River). In 1884, G. Thureau travelled from the Mount Victoria to the Black Boy goldfield and in passing down the Dan Rivulet Valley referred to Kerrigan's Discovery. This prospect later became the O'Brien mine and the first leases on it were granted in 1884. However, in the south-western part of E.L. 3/80 there are two mines which are now regarded as being in the Dan Rivulet field, but were probably regarded as being in the Mathinna field. The two mines are City of Melbourne and True Blue on which the first leases were granted in 1872.

The mines or workings in E.L. 3/80 and the year in which leases were first granted on them are given in the following table No. 1. The information was obtained from the 1947 report of T.D. Hughes.

TABLE 1

LIST OF MINE WORKINGS

Mine Workings	Year of First Lease	Mine Workings	Year of First Lease
Golden Horseshoe	1895	Bright Star	1888
City of Melbourne	1892	New Golden King	1901
True Blue Leases 819 + 821/939	1872	Waterfall	1903
Lady Mary	1888	October	1897
Heaton (or Eton)	1895	Mabel	1896
King Solomon	1896	Revenue	1897

4. THE MINE WORKINGS

A list of the old mine workings is given in Section C of this Report. The last shows also the year in which the mining first lease was granted. The workings are therefore old and most of them were shallow. Some of the workings have collapsed, and some have been filled in, and many of them cannot be examined.

T.D. Hughes in his 1947 report gave descriptions of the workings that were available for inspection and also obtained information from the plans submitted to the Department of Mines. In his 1967 report, V.M. Threader made use of all information available to that year and prepared a Summary of the Workings in the goldfields that he examined.

A copy of the Summary has been extracted from the Summary for the mines on E.L. 3/80 in part of the Dan Rivulet Goldfield, and is attached to this report as an appendix (TABLE 4).

5. PRODUCTION

Details of the production were given in the 1947 report of T.D. Hughes and the 1967 report of V.M. Threader. In his report of 1980, the writer included the information in his Tables 1 and 2 and copies of those two tables are included in this report as Tables 2 and 3. Figures in Table 3 are the most complete and show production from five mines (Revenue, Mabel, Golden Horseshoe, City of Melbourne and New Golden King). The total production of gold was 1274.70 ounces from 4248 tons of ore and 260 tons of sand. The production was between 1898 and 1910, and there has therefore been no production for more than 70 years. The largest producer was the New Golden King Mine with 737 tons.

TABLE 2

PRODUCTION FIGURES OBTAINED FROM V.M. THREADER'S REPORT OF 1967

Name	Latest Lease	Production Ounces
Revenue	100G -101G	-
Maple	1213/93G	38
October	1304/1084/93G	-
Bright Star	1087/1088/93G	-
King Solomon	605/606/93G	-
Heaton (now Eaton)	773/G	-
Lady Mary	512/513/93G	-
True Blue	808/93G	-
Golden Horseshoe	704/G	224
City of Melbourne	350/G	88.5
Leases 819 + 821/93G	819 to 822/93G	-
New Golden King	310/G	593
Waterfall	325/327/G	-

TABLE 3

PRODUCTION FIGURES OBTAINED FROM T.G. HUGHES' REPORT OF 9/9/47

NAME OF MINE	YEAR	QUARTER	ORE CRUSHED TONS	GOLD PRODUCED OUNCES	REMARKS
<u>REVENUE</u> First leased in 1897	1902		18	23.55	Trial crushing from surface working
	1902	EC	50	14.	
	1903	MARCH	84	16	
	1903	JUNE	150	24	
	1903	SEPT	109	21	
	1903	DEC	-	6	
			411	104	
<u>MABEL</u> First held in 1896	1898		96	38	Trial crushing underfoot 100ft level
	1900		22	38.65	
			118	76.65	
<u>GOLDEN HORSESHOE</u> First taken up in 1895	1910		1604	144	From surface working
<u>CITY OF MELBOURNE</u> First taken up in 1872	1905	SEPT	13	22	
	1906	JUNE	25	6.5	
<u>NEW GOLDEN KING</u> First applied for in 1901	1902		264 (ore)	244	
			260 (sand)		
	1903		1350	593	
<u>TOTAL</u>		ORE	4248	1274.70	
		SAND	260		

6. THE REEFS

The gold deposits are quartz reefs occupying planes of foliation, bedding, jointing and perhaps faulting. The reefs contain sulphide minerals in varying amounts that are generally low. The minerals are arsenopyrite, pyrite, chalcopyrite, sphalerite and galena, and the most abundant are the pyrite and arsenopyrite. The literature makes little reference to an oxidised zone, but it is possible that most of the production was from the oxidised zone.

Table 4 (which is an appendix to this report gives some information about the strike, dip, width, length and grade of the reefs in the old mine workings).

7. EXPLORATION

7.1 GENERAL

The information given earlier in this report shows the field has been known for a long time. Much prospecting and some mining have been done in that time. Parts of the field were discovered as early as 1872 and the greater part since 1884. No alluvial mining appears to have been conducted and there is no record of production of alluvial gold.

There are 13 groups of mine workings and production came from only five of them. Production was small (1274.7 ounces of gold) and there has not been any production since 1910 .

Some of the old mine workings have collapsed and some have been filled in as the area is now being developed as a forestry one.

It is probable that previous prospecting has revealed most, if not all, of the outcropping quartz reefs, and surface prospecting is not likely to produce any favourable results. Some information can be obtained from shallow workings that have not collapsed and further information could be obtained if the workings were cleaned out and retained. Much reliance has however to be placed on information obtained and described before the workings collapsed. Some information about the old workings is given in Table 5; the information was taken from V.M. Threader's report of 1967.

7.2 BY MINERAL HOLDINGS

Mineral Holdings conducted considerable surface prospecting and sampling. It was devoted mainly to :

- i) reef exposures in road cuttings and in other places where bull dozers had been working;
- ii) in old workings not collapsed and some of those which were cleaned out and repaired; and
- iii) some ore dumps.

The prospecting was carried out by Mr. H. Rayner.

Twenty six samples were taken from old workings and 29 from quartz reefs in sand cuttings and bull dozer cuts. The samples were analysed by the Department of Mines laboratory in Launceston.

7.3 BY A.C.A. HOWE AUSTRALIA PTY. LTD. FOR STURTS MEADOWS PROSPECTING SYNDICATE N.L.

This syndicate entered into a joint venture with Mineral Holdings, and investigations from December 1979 to April 1980 were carried out. After its preliminary exploration and investigations the whole of the Dan Rivulet field (E.L.31/76 and E.L.3/80) the Syndicates selected mine workings and areas for further investigation and testing, but they were all within the Licence area of 31/76.

No areas in E.L. 3/80 were selected for testing of alluvial deposits.

The A.C.A. Howe report was completed on 31st May 1980. Although the joint venture agreement extended to December 1980, the Syndicate made no arrangements for any further exploration or testing.

7.4 BY J. HEGGIE

Mr. Heggie took a composite sample from five locations on a tailing dump at the New Golden King mine.

8. GENERAL CONCLUSIONS

The exploration by Mineral Holdings Australia consisted of :

- i) sampling of quartz reef exposed in recent road cuttings and other excavations by bulldozers; and
- ii) sampling of quartz reefs in old mine workings and of small dumps of ore at a few of the workings.

Very few of the samples yielded gold bearing quartz or ore grade. The ACA Howe Company conducted investigations for the Sturts Meadows Syndicate (which had a joint venture with MHA) in the Dan Rivulet Goldfield, but selected for further inspection only a few of the old mines in part of E.L. 31/76.

The above information indicates that the part of the Dan Rivulet Goldfield in E.L.3/80 is not likely to yield favourable results for exploration on it.

P.B. NYE

Melbourne
3/11/81

TABLE 4

APPENDIX

Goldfield	No. Reef		Summary of Mine Workings	Strike	Dip	Reef Details		Grade		Remarks
	No.	Name				Width ft. in.	Length ft.	oz.	dwt/ton	
	13	Revenue	200ft. adit and shallow shafts and trenches	045	78NW	2	-	-	-	-
	14	Sections 819 + 821/936	70ft. adit and trenches	-	-	-	-	-	-	-
	15	Mabel (Dans Reward)	100ft. inclined shaft	140	85NE	-	-	-	8	38oz. output
	16	October	84ft. shaft, 2 inclined shafts and trenches	055 360	80NW 70W	2 5	- -	17 to 20 dwt/ton	- -	- -
	17	Waterfall	260ft. adit, inclined shaft, shallow shaft and surface slope.	008 075	80E 80N	4in to 9in	-	-	-	-
	18	Bright Star	40ft. adit, inclined shaft and trenches	090 360 060	- - 30E	- - -	- - -	- - -	- - -	- - -
	19	King Solomon	4 shallow vertical shafts	035	80NW	-	3	-	-	-
	20	Heaton	Main Shaft several shallow shafts and surface slopes	090	70 (2 parallel veins)	-	-	-	-	-
	21	Lady Mary	105ft. shaft and several shallow shafts and surface slopes.	045	75E(3 sub parallel veins)	-	-	-	-	-
	22	Golden Horse-shoe	110ft. shaft with 40ft. crosscut, 80ft. shaft and 60ft. adit	090 "	60N Vert	- -	3 4	- -	- -	224oz. output -
	23	True Blue	45ft. inclined shaft and shallow vertical shaft	090	80S	-	-	-	-	-
	24	City of Melbourne	5 shafts with some reef drives	045 090	70S 70S	- -	- -	- -	- 15	- 88.5oz. output
	25	New Golden King	192ft. shaft with 2 levels and 3 adits	360	70W	3in to 5ft	-	-	9	593oz. output

854023

TABLE 4

APPENDIX

(A Summary of Mine Workings)

unvarnished

854024

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Idfield	Roof		Summary of Mine Workings	Strike Degrees	DIP Depth	Roof Details		Grade		Remarks
	No.	Name				Width ft. in.	Length ft.	oz.	dwt./ton	
	14	Sections 619 and 621/939 C	70ft. adit and trenches	-	-	-	-	-	-	-
	15	Rebel (Dens toward)	100ft. inclined shaft	140	85NE	-	-	-	8	38oz. output
	16	Catcher	8ft. shaft, 2 inclined shafts and trenches	055 360	80NW 70E	2 5	- -	17 to 20 dwt/ton	- -	- -
	17	Waterfall	260ft. adit, inclined shaft, shallow shaft and surface stopes	008 075	80E 80W	4in to 9in	-	-	-	-
	18	Bright Star	40ft. adit, inclined shaft and trenches	090 360 060	- - 30E	- - -	- - -	- - -	- - -	- - -
	19	King Solomon	1 shallow vertical shaft	035	80W	-	3	-	-	-
	20	Newton	Main shaft several shallow shafts and surface stopes	090	70 (2 parallel vertical)	-	-	-	-	-
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	21	Body Day	10ft. shaft and several shallow shafts and surface stopes	045	75 (3 subparallel voids)	-	-	-	-	-
	22	Golden Goose Mine	110ft. shaft with 40ft. cro. vent, 80ft. shaft and 60ft. adit	090	60N Vert	-	3 4	-	-	22 1/2 oz output
	23	True Mine	45ft. inclined shaft and shallow vertical shaft	090	80E	-	-	-	-	-
	24	City of Melbourne	5 shafts with some reef driven	045 090	70E 70E	-	-	-	15	88.5 oz output
	25	New Golden Mine	192ft. shaft with 2 levels and 3 shafts	360	70E	3in to 5ft.	-	-	9	593 oz output