REPORT ON THE BORING CAMPAIGN ON THE WELD FROME LEAD AT MOORINA.

INTRODUCTION

The object of this campaign was to verify the course of the lead as determined by geological survey and to determine generally the value of the tin contents of the above lead. The boring was carried out under the control and direction of Mr. J.B. Scott, State Mining Engineer. Altogether 13 holes were put down with a total depth of 2,484½ feet. The ground was sampled in lengths of 7 feet for the 5 inch holes and 11½ for the 4 inch holes. All samples were concentrated by panning at the drill and the concentrates forwarded to the Government Chemist and Assayer, Launceston, for weighing and analyses. A total number of 260 samples were weighed and assayed for tin.

The results have been worked out by members of the Geological Survey, and the contents of each sample and each hole determined.

RESULTS

The complete results of the boring are given in the attached table No. 1. The results of each bore are given in the following table No. 2.

TABLE NO. 2.

NO. 1 LINE OF BORES.

No.	Depth	Average Value of Tin Oxide in ozs. Per Cubic Yard.
1	186	1.032
2	155	0.754
3	172	2.07
4	182	1.492
5	182	3.631
6	205	1.959
7	169	1.568
8	134	1.353
9	186	1.215
	1571	1.623

NO. 2 LINE OF BORES

10	173	0.425
11	1945	0.791
12	266	1.461
13	280	0.749
	913.5	0.093

COURSE OF THE LEAD

The No. 1 line of bores includes from north east to south west Nos. 8,7,6,5,1,2,3,9 and 4. A cross

section drawn from this line shows that the gutter of the main lead is in the vicinity of No. 6 Bore hole. Another gutter occurs close to No.4 bore hole and between it and No. 3 hole. The bottom of this gutter is 47 feet above the main one. The buried ridge dividing these gutters rises to a height of 82 feet above the bottom of the main gutter.

The No.2 line includes from east to west boreholes Nos. 10, 11, 12 and 13. These revealed only the eastern side of the lead but indicate that No. 13 bore hole is approximately in the gutter of the lead.

The general direction of the lead from No. 6 to 13 bore-hole is slightly west of north.

It has been suggested that the No.2 line cut the Main or Ringarooma lead. This, however, is impossible as the bed of the latter lead would be at much greater depth than the bottom as revealed in the bore-holes.

VALUE OF THE LEADS

Table No.2 shows that the average value of the content of tin oxide in the bore holes in No.1 line ranges from 0.754 to 3.631 ozs. per cubic yard. The average content of the 9 holes is 1.623 ozs. per cubic yard.

Of the individual holes, No.5 is the best with a value of 3.631 ozs. of tin oxide per cubic yard, while No.s. 3 and 6 follow in that order with contents of 2.07 and 1.959 ozs. per cubic yard.

The lead is tin-bearing throughout except for the beds of clay (pug) and sediment (clayey beds which have an apparent granular structure). The contents of the different layers have a considerable range from under one up to over 30 ozs. of tin oxide per cubic yard. The highest values were obtained in No.5 hole where a content of 30 ozs. per yard occurred on the granite bottom, while contents of 17 ozs. per yard were revealed immediately above the bottom and half way down the hole. The only other sample which exceeded 10 ozs. was that on the bottom of No.9 hole.

In No.2 line, the content ranges from 0.425 ozs. to 1.461 ozs per cubic yard, the average of the four holes being 0.903 ozs. per cubic yard. The No.12 hole gave the highest value. The content of individual samples exceeded 4 ozs. per cubic yard in only three instances two of which were in No.13 hole.

DISTRIBUTION OF THE VALUES

The best values were, as is usually the case, present near the bottom of the tin bearing beds where they rest upon the bedrock. Good values were, however, also revealed higher up in the bore holes.

These are generally at similar levels but cannot be regarded as a continuous bed across the deposit. When it is considered that the lead is 25 chains wide across the No.1 line of holes, it is obvious that the river could not have in the past worked over this width. It apparently worked

over widths of two to five chains for a certain period before its course was altered. Thus individual beds will be found to be traceable only for widths of two to five chains particularly during periods of formation of gravels. This is borne out by the results of the working of the ground in which individual "Runs" of tin bearing "wash" have been found to occur for widths of two to five chains while to either side it is replaced by similar "runs" at slightly different levels.

CONCLUSIONS.

The boring campaign proves that excepting for the layers of clay ("pug" and "sediment") the material of the lead is tin-bearing throughout. The general value as revealed by the boring is however low. The highest values occur at the bottom of the ground and also at higher levels in the lead. These latter represent narrow "runs" (two to five chains) at various points within the lead. It is such "runs" that have been and are being worked in the mine. The richer ground on the bottom occurs in the deeper gutter on the eastern side of the lead. Another gutter occurs at a higher level on the western side of the lead.

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3/1/31

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TABLE No. 1

No. 1		No. 2		No. 3		No. 4		No. 5	
Sectional Depth ft.	Content of Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content Tin Oxide ozs. per cub. yd.	Sectional Depth ft.	Content Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content Tin Oxide ozs. per cub. yd.
0-6	nil	0-7	0.111	0-7	nil	0-7	nil	0-21	nil
6-13	0.051	7-14	0.876	7-14	0.287	7-14	0.352	21-28	8.414
13-20	0.054	14-21	0.984	14-21	0.434	14-21	0.436	28-42	nil
20-27	0.317	21-28	0.331	21-28	0.363	21-28	0.252	42-49	0.557
27-34	1.035	28-35	0.365	28-35	0.387	28-35	0.300	49-56	1.961
34-41	0.829	35-42	0.353	35-42	0.805	35-42	0.072	56-63	1.009
41-48	1.701	42-49	0.690	42-49	0.478	42-49	0.541	63-70	5.481
48-55	4.588	49-56	1.206	49-56	2.661	49-56	0.946	70-77	1.377
55-62	0.743	56-63	2.135	56-63	1.478	56-63	4.695	77-84	1.466
62-69	0.663	63-70	0.558	63-70	0.726	63-70	4.174	84-91	0.591
69-76	3.166	70-77	0.477	70-77	nil	70-77	1.949	91.98	17.687
76-83	3.595	77-84	0.843	77.84	2.597	77.84	0.866	98.105	6.792
83-90	1.333	84.90	7.352	84-91	8.531	84-91	3.200	105-112	3.904
90-97	nil	90-146	nil	91-98	1.909	91-98	1.133	112-119	0.284
97-104	0.513	146-155	1.141	98-105	0.932	98-105	3.427	119-126	0.145
104-109	nil	average	0.754	105-132	nil	105-112	0.212	126-133	2.295

Table No. 1 cont.

No. 1		No. 2		No. 3		No. 4		No. 5	
Sectional Depth ft.	Content of Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide ozs. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide ozs. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide oz per cub. yd.
109-116	1.702			132-143½	0.110	112-118	0.141	133-140	1.257
116-146	nil			143½-155	7.194	118-128	nil	140-147	0.533
146-157	0.707			155-166½	9.515	128-135	0.174	147-158½	3.641
157-168	0.616			166½-172	2.088	135-142	0.276	158½-170	2.132
168-179	2.385			Average	2.07	142-149	0.900	170-181½	17.624
179-186	1.317					149-156	7.718	181½-182	30.854
Average	1.032					156-163	3.319	Average	3.631
						163-174½	1.797		
						174½-182	0.732		
						average	1.492		

No. 6		No. 7		No. 8		No. 9	
Sectional Depth ft.	Content of Tin Oxide ozs. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide oz. per cub. yd.	Sectional Depth ft.	Content of Tin Oxide ozs. per cub. yd.
0-7	Nil	0-1	Nil	0-1	Nil	0-7	Nil
7-14	2.576	1-7	0.527	1-7	0.476	7-14	0.128
14-21	0.597	7-14	1.364	7-14	3.007	14-21	0.793
21-28	0.631	14-21	2.184	14.21	0.629	21-28	0.311
28-35	0.262	21-28	2.173	21-28	0.252	28-35	0.121
35-42	0.551	28-35	0.531	28-35	0.235	35-42	0.130
42-49	0.193	35-42	0.956	35-42	0.738	42-49	0.343
49-56	0.460	42-49	0.256	42-49	1.466	49-56	0.393
56-63	0.298	49-56	0.526	49-56	0.442	56-63	0.161
63-70	0.224	56-63	3.780	56-63	0.316	63-70	0.124
70-77	4.413	63-79	nil	63-70	0.896	70-77	0.313
77-84	2.871	79-86	0.549	70-77	0.476	77-84	0.694
84-91	1.675	86-93	0.817	77-84	0.326	84-91	1.505
91-98	0.505	93-100	3.733	84-91	7.519	91-98	2.336
98-105	1.934	100-125	Nil	91-98	2.708	98-107	Nil
105-112	6.998	125-132½	2.793	98-118	Nil	107-114	1.852
112-132	Nil	132½-144	3.457	118-125	2.325	114-121	7.021
132-139	0.359	144-155½	3.888	125-129	Nil	121-124½	12.932
139-146	0.382	155½-166	0.905	129-134	5.719	124½-136	1.164
146-153	0.645	166-169	9.448	Average	1.353	136-147½	0.441
153-160	0.308	Average	1.568			147½-159	0.091
160-163½	1.249					159—170½	0.324
163½-175	1.158					170½-182	0.180
175-186½	6.901					182-186	10.451
186½-198	9.112					Average	1.215
198 -205	2.666						
Average	1.959						

No. 10		No. 11		No. 12		No. 13.	
Sectional Depth Ft.	Content of Tin Oxide .025 per cub. yd.	Sectional Depth Ft.	Content of Tin Oxide .025 per cub. yd.	Sectional Depth Ft.	Content of Tin Oxide .025 per cub. yd.	Sectional Depth Ft.	Content of Tin Oxide .025. per cub. yd.
0-7	NIL	0-7	NIL	0-7	NIL	0-7	NIL
7-14	0.136	7-14	0.484	7-14	.219	7-14	0.283
14-21	1.083	14-21	0.95	14-21	.108	14-21	0.299
21-28	0.393	21-28	0.208	21-28	.272	21-28	1.102
28-36	NIL	28-33	0.404	28-35	.363	28-35	0.850
36-43	0.443	33-35	NIL	35-42	.205	35-42	0.359
43-50	0.129	35-42	0.729	42-49	1.108	42-49	0.595
50-57	0.175	42-49	0.356	49-56	1.273	49-56	0.521
57-64	0.326	49-56	0.289	56-63	.287	56-63	1.708
64-71	0.286	56-63	0.231	63-70	NIL	63-70	4.645
71-78	0.112	63-70	0.262	70-77	.194	70-77	0.272
78-85	0.117	70-77	0.777	77-84	.703	77-84	0.148
85-92	NIL	77-84	0.191	84-91	.364	84-91	0.679
92-99	0.497	84-91	NIL	91-98	1.466	91-98	0.604
99-113	NIL	91-98	0.344	98-105	NIL	98-105	0.529
113-120	0.422	98-105	NIL	105-112	.231	105-112	0.243
120-127	0.687	105-112	0.141	112-119	.288	112-119	NIL
127-138½	1.786	112-119	NIL	119-126	NIL	119-126	NIL
138½-150	0.331	119-126	NIL	126-133	NIL	126-133	NIL
150-161½	0.952	126-133	0.434	133-140	.583	133-140	NIL
161½-173	0.404	133-140	0.52	140-147	.372	140-147	0.261
Average	0.425	140-147	1.573	147-154	1.040	147-154	0.658
		147-154	0.738	154-161	NIL	154-161	1.371
		154-161	NIL	161-168	NIL	161-203	NIL
		161-168	3.165	168-179½	1.553	203-214½	2.312
		168-175	1.689	179½-191	3.392	214½-226	2.397
		175-186½	2.579	191-202½	3.119	226-237½	1.605
		186½-194½	3.269	202½-214	2.704	237½-249	2,198
		Average	0.791	214-225½	2.793	249-260½	1.069
				225½-236	2.497	260½-272	1.633
				236-247½	4.077	272-280	4.578
				247½-259	2.315	Average	0.749
				259-266	1.867		
				Average	1.461		