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PIEMAN GOLD-OSMIRIDIUM FIELD

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Melbourne,
7th Nov., 1949.

MICROFILMED

The Secretary,
Tasmanian Mines N.L.

Dear Sir,

PIEMAN GOLD-OSMIRIDIUM FIELD

The following is my report on the Pieman-Huskisson Area. The work has taken much time partly owing to the poor grade of labour offering at the beginning of operations, and partly on account of the structure and complexity of deposits and the difficulty in penetrating the dense scrub areas.

All supplies have of necessity, been "man-packed" to the field at a cost of approximately 1/- per lb.

LOCATION

The area is 5 miles from Renison Bell Railway Station, on the West Coast of Tasmania, and is reached by foot track with two hand operated cableways over the Pieman and Huskisson Rivers respectively.

The area x controlled by the Company is shown on the accompanying map.

STRUCTURAL

The area investigated is situated within the Great Arc formed by the Pieman and Huskisson Rivers, the central core of which consists of an intrusive massif of osmiridium bearing serpentine.

At the end of the Ice Age this river arc had formed a wide wash filled channel, shown in yellow on the map. During the long period of subsequent uplift the rivers were forced out of their original beds and cut new ones in the present position, about 40 chains to the North and 300 feet below the original bottom.

At the commencement of this operation, the depth of the wash in the primary channel was about 200 feet; as the operation continued tributary streams from the central Serpentine mass cut channels across the primary alluvials progressively denuding it and forming secondary alluvial deposits between the old and new channels.

The following three metals were found in the alluvials:-

1. OSMIRIDIUM. Partly derived from denudation of the local serpentine and partly carried from a distance with the gold.

2. GOLD. This was carried down by the Huskisson from its western catchment and also from the head waters of the Wilson River, which apparently flowed into the Huskisson, instead of into the Pieman as at present.

3. TIN. This has been found in appreciable quantities in the Barnes and Sweeney Creek Areas, but traces only occur in the alluvials of Trinder Creek. Its source is unknown.

TYPES OF DEPOSIT

Apart from the wash in the beds of the tributary creeks which have been completely worked out, there are three types of wash in the area;-

A. Eluvial deposits formed by weathering and denudation of the serpentine on the slopes above the Sweeney, Merton, Riley, Trinder and other creeks.

B. Primary wash in the great breached crescent shaped terrace deposits of the original channel. This conforms with the great arc of the rivers.

C. Secondary wash. During gradual denudation by action of the tributary streams, the greater proportion of the transported primary wash was discharged into, and carried away by, the main river; but part of the wash and the heavy metals have been deposited as secondary wash in the sins and flats formed above the river. In these areas enrichment of values has occurred. The chief of these areas are:-

1. The flat at the junction of the Huskisson River and Merton Creek.
2. Sweeneys Creek flat.
3. Barnes Creek section, including New, Carpenter, Barnes, McGuiness and King Creeks.
4. Sailor Jack Creek section.
5. Trinder Creek section, formed by Fowler, Trinder, No. 6, No.5 and Riley Creeks.
6. The flat at the junction of Limestone Creek and the Wilson River. This is remote from the other sections.

The total area of these primary alluvials is about 150 acres, which would in itself be sufficient for a profitable operation if the payable depth were adequate.

SAMPLING

In view of the above it was obviously necessary to find the secondary alluvials payable before an extensive and costly boring campaign of the lower grade primary alluvials was justified.

Barnes, Sweeney and Trinder sections were selected for pitting, as these constitute more than half the secondary area and all have somewhat different characteristics.

The eluvial deposits along Riley Creek were also tested, but apart from a few encouraging samples in the feeder creeks, the remainder was unpayable.

To obtain the samples pits were sunk on the flats and stepped cuts made up the sides of the terraces. From these, samples were taken from regular trenches cut down the vertical faces at the rate of 2 cubic feet per foot of depth.

Pits were sunk to bedrock or as deep as the influx of water permitted.

Samples for each 5 feet of depth were treated in a small sluice box and the concentrates from the box panned down to small bulk for assay.

A REVIEW OF RESULTS

The value of samples from pitting of the flats in Barnes, Trinder and Sweeney sections, are shown in the accompanying tabulations.

The terrace stepped samples were uniformly unpayable and some were so low in value that they could not be weighed. They are therefore not shown.

SWEENEY'S CREEK. In regard to Sweeneys Creek flat, the weather before and during my inspection was so bad that the flat was water-logged and the pits could not be emptied by the power pump.

The Foreman advised me that 2 of the 10 pits sunk showed good values by panning; and my panning of the material dumped from them confirmed this. The dumped material at the other pits however, showed practically no wash at all and the line of the two good pits evidently marks a recently formed "gutter", which would not return sufficient wash to warrant equipment of this section.

TRINDER CREEK SECTION. The first assays done after my previous inspection were encouraging, but subsequent work has been disappointing.

At the up stream part of this section the streams have not cut down to bedrock and the secondary deposits overlie primary deposits. Even in the down stream areas, where bottom has been found, results have been disappointing, except at the actual junction of two creeks. This was the cause of the good grade reults from pits P.9, P.16 and P.17, two of which were previously reported. It will also be seen that contrary to usual conditions, values have become impoverished with depth.

.e average of the assays in this section is too low to be payable.

BARNES CREEK SECTION. This includes the New Creek "Bowl".

It will be seen there are several good grade assays in this section, but these are all taken from pits at the junction of Barnes and Carpenter Creeks. There is certainly a small flat in this vicinity which would be profitable, but their alluvial stretching up Barnes Creek from this area, consists mostly of terraces; and sampling of the wader areas of Carpenter and New Creek Bowl are low grade as shown in the appendix.

The only terrace sample which gave good results in this area was a 5 foot sample (at the bottom of a 50 foot terrace) which assayed 13 pence per cubic yard and contained tin only.

OTHER SECTIONS:

Sailor Jack Creek section was formed under precisely the same conditions as Barnes Creek and will therefore not give any extent of payable wash.

Limestone Creek section is too remote to be valuable, except as an adjunct to a larger project.

Merton Creek Flat was not tested, but even with the addition of the small flat in Barnes Creek section, would not afford more than 30 to 40 acres. This would not be sufficient to warrant the high capital cost of equipment and the costly transport equipment necessitated by the rugged and difficult terrain.

CONCLUSION

The sampling of the secondary terraces shows that the primary deposit will not be payable, and therefore in view of the failure of the secondary flats I am forced to advise that the Pieman project should be abandoned.

Yours faithfully,

(signed) J.C. Coldham

APPENDIX TO REPORT

PIT RESULTS FROM TRINDER CREEK SECTION.

No.	Overburden ft.	Sample (ft) From	To	depth	Total depth ft.	Value pence C.Yd.	
P1	1.0	1.0	6.0	5.0	6.0	3	
P2	0.5	0.5	5.0	4.5	5.0	6	
P3	0.5	0.5	7.0	6.5	7.0	4½	
P4	0.5	0.5	6.0	5.5	6.0	3½	
		6.0	11.0	5.0	11.0	1	
		11.0	14.0	4.0	14.0	3	Bottomed on primary wash.
P5	0.5	0.5	4.5	4.0		6	
			4.5	10.5		low	
P6	0.5	0.5	6.5	5.0		9	
		6.5	11.5	5.0	11.5	4	Bottomed on primary wash
P7	0.5	0.5	7.0	6.5		6	
		7.0	11.0	4.0		2	
		11.0	16.0	5.0	16	4	Bottomed on primary wash
P8	-	0	5.0	5.0		18	
		5.0	9.0	4.0	9.0	2	
P9	-	0	7.0	7.0	-	16	
		7.0	11.0	4.0	-	18	
		11.0	13.0	2.0	13.0	-	In valueless running sand - could not be extended.
P10	3.0	3.0	10.0	7.0	10.0	4	Could not be sunk further owing to water.
P11	2.0	2.0	7.0	5.0	-	7½	
		7.0	12.0	5.0		4	
		12.0	16.0	4.0	16.0	2	Not bottomed.
P12	1.0	1.0	7.0	6.0		9	
		7.0	12.0	4.0	12.0	Trace	
P13	1.0	1.0	2.0	2.0		Trace	White - Spill wash
		2.0	8.0	6.0	8.0	3	
P14	1.0	1.0	6.0	5.0	6.0	Nil	In valueless clay. Bottomed on soft slate.
P15	1.0	1.0	6.0	5.0	6.0	13	Bottomed on soft slate
P16	-	0	4.0	4.0	-	19	
		4.0	8.0	4.0	8.0	16	Bottomed on soft slate
P17	2.0	2.0	7.0	5.0	7.0	28	" " " "
P18	-	0	6.0	6.0	6.0	Nil	In valueless clay. Bottomed on soft slate
P19	1.0	1.0	5.0	4.0		6½	
		5.0	10.0	5.0		Trace	
		10.0	15.0	5.0		2½	
		15.0	20.0	5.0	20.0	3	Bottomed on soft slate
P20	1.0	1.0	5.0	4.0		4	
		5.0	10.0	5.0	10.0	2	Bottomed on soft slate

RESULTS FROM BARNES (& NEW) CREEK SECTIONS.

No.	Sample From	Ft. To	Depth	Total Depth Ft.	Value Pence C.Yd.	
B1	0	6.5	6.5		23½	2 ch. from Carpenter Creek Junction
B2	0	5.0	5.0		13	3 ch. " " " "
	5.0	10.0	5.0	10.0	2½	On bedrock
B3	0	8.0	8.0		3½	In Carpenter Creek to b.roc
B4	0	8.0	8.0		7½	" " " "
N1	0	6.0	6.0	7.0	7	West side of Bowl
N2	0	5.0	5.0		10	East " "
N3	0	5.0	5.0		7	Near Creek
N4	0	6.0	6.0		4	
N5	0	10.0	10.0		Nil	Sample in low terrace in middle of Bowl.

(signed) J.G.C.