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Q 32 No 30

Q32-30

BELLS PLAINS AREA
N.E. TAS
by. L. D. Hughes 1966

Bells Plains Area - near N.E. Tas.
by T. D. Hughes. 1966.

223E

BELLS PLAINS AREA - N.E. TASMANIA

SUMMARY

A reconnaissance survey for alluvial tin was carried out in the first quarter of 1966, on behalf of Kathleen Investments (Australia) Pty. Limited, of the Bells Plains area. Samples were obtained from trenches and pits put down by bulldozer and back hoe. Twenty-seven pits averaging nine feet in depth were sampled and showed an average value of 3.2 ozs. per cubic yard of 70% concentrate. The area contains about one million yards of alluvial material on an uneven granite bottom.

LOCATION AND ACCESS.

Bells Plains is located in high country near the head of Black Creek, about 5 miles from Ringarooma in North-Eastern Tasmania. The old Ringarooma-Weldborough Road runs through the area, which can be reached by land rover from either Ringarooma or Branxholm.

TITLE.

The area is held for the Company under S.P.L. No. 15 in the name of J. Neale. It is all Crown Land. To the east is a small lease of 16 acres in the name of L. Barnett which is under option to the Company.

TOPOGRAPHY AND VEGETATION.

Bells Plains is a broad flat valley approximately 1520 feet above sea-level, 5,000 feet long by 900 feet wide. Black Creek runs in a general north-westerly direction along its north-eastern margin. It is bordered to the north-east and south-west by granite hills. To the north-west, below the junctions with Nelson and Exile Creeks, the alluvium narrows. The slope of the valley floor is slight; from "F" line to "A" line, a distance of nearly 5,000 feet, the fall is 55 feet.

Most of the area is covered by heavy rain forest of myrtle, sassafras and celery top pine, carpeted with ferns. Swampy portions consist of large cutting grass, sags and ti-tree. A small area near the hut and old mill site is cleared.

GEOLOGY.

The underlying rock of the valley floor is a medium grained Devonian granite. A few hundred feet up Black Creek from the limit of the alluvium is the contact of the granite and the "Mathinna" Series of sediments. These latter rocks consist of beds of quartzites and siliceous silt-stones. They also occur intruded by granite in the hills bordering the valley.

The alluvium belongs to the Pleistocene, a period of very heavy rainfall. Consequently the boulders of the wash are very large - up to 2 feet in diameter, and make up about 80% of the wash, the interstices being filled with fine to coarse sand, rarely clay. Minor cut and fill structures can be observed in some holes. About 5% of the boulders are granite and the remainder "Mathinna" quartzites. A layer of about one foot of Recent sand and clay covers the Pleistocene wash.

WATER SUPPLY AND POWER.

The old Nugget Race is cut into the hill to the north-east and about 100 feet above the valley floor. The catchment for this is small and little water is available in the summer. Black Creek is a permanent stream but again contains very little water in the summer. On the other hand the permanent water table in the alluvium is about 5 feet from the surface after this long dry period.

Power lines are about 4 miles from the deposit.

SAMPLING PROGRAMME.

Pits were sunk on six lines, "A" to "F", (approximately 1,000 feet apart) at intervals of about 100 feet. Sinking was done by bulldozer or back hoe, or a combination of both. Most of the ground stood fairly well, although below 5 feet from the surface constant pumping was necessary to keep the holes dry for sampling. Samples were taken on a continuous sample down the sides of the pits, usually in five feet sections. The sample was measured (3 cubic feet) in portion of a 44 gallon drum. The heavy wash was then discarded in a portable sluice box, the sand and small pebbles cradled and finally concentrated down to about 2% Sn in a dish. The samples were dried, weighed and assayed at the Department of Mines in Launceston. Thirty-one pits, averaging nine feet in depth were put down. Of these, five were not bottomed as the depths to bottom were beyond the capacity of the mechanical diggers.

RESULTS.

Details of the sampling are shown in Appendix No. 1.

The results show an overall grade of about 3 ozs. per cubic yard. About one million cubic yards of material are available. Except for surface sand, about 1.5 feet, most of the material of the allumium is a heavy wash and it all carries some tin, although values are slightly higher at the bottom. Except

for two or three holes, the grade appears much the same throughout the area, although a small section worked by Barnett near the upper limit of the area is reported to carry 2 lbs. to the yard. The better grade of this section is due to a change in direction of the old Pleistocene river and the concentration of cassiterite behind the granite nose formed by this. It is also significant that one of the better samples came from a pit just ahead of old workings to the north-west of the area. There is some ilmenite associated with the cassiterite in the wash.

The grade of 3 ozs./yard established by this reconnaissance survey is probably lower than the overall values for the following reasons:

1.. A few of the deeper pits were not bottomed.

2. The bedrock is uneven in contour and degree of weathering. Values obtained on soft granite bottom are usually better than on hard. It is probable in such widely spaced pitting that concentrated veins of cassiterite were missed.

The cassiterite is fine to medium grained and it is not expected that much would be lost by normal recovery methods.

RECOMMENDATIONS.

Because of the low grade and limited yardage available, it is recommended that no further testing be done by the Company.

Lawrence D. Hughes

Geologist.

11th March, 1966.

APPENDIX NO. 1

HOLE NO.	DEPTH (FT.)	VALUE (oz/c. yd. of 70% Conc.)	DETAILS
A1	6	4.2	1' O/B. Wash 80% Stones up to 9" diam. 5% Granite soft granite bottom.
A2	6	14.3	1' O/B. Wash 70% stones up to 9" Soft granite bottom.
A3	10*	2.3	1' O/B. Wash 80% stones up to 12" diam.
A4	3	4	1' O/B. Wash 50% stones soft granite bottom.
B1	6	1.5	3' O/B. Wash 80% stones up to 6" diam. Soft granite bottom.
B2	7'6"	2	2'6" O/B. Wash 75% stones up to 9". 5% granite. Soft granite bottom.
B3	11	3	2' O/B. Wash 80% stones up to 6". 5% granite (up to 1'6" diam.). Soft granite bottom.
B4	10	1.2	1' O/B. Wash 90% stones to 12". Granite 5% soft granite bottom.
B5	8	1	5' O/B (black clay) wash 70% stones. Granite 5% medium granite bottom.
B6	7	2.2	1' O/B. Wash 60% stones to 12" diam. Hard granite bottom.
B7	6	3	1' O/B. Wash 50% stones to 12". 5% granite. Hard granite bottom.
B8	6	20	Small boulders but granite boulders 18" near soft granite bottom.
C1	5	3.5	2' O/B. Wash 70% stones to 6" diam. 5% granite hard uneven granite bottom.
C2	10	2.5	1' O/B Wash 75% stones up to 12" diam. Granite boulders to 2' near soft granite bottom.
C3	16*	1.6	Wash 80% to 12". Large granite boulders (up to 2') at 11'.
C4	10	3.6	2' O/B Wash 70% boulders up to 18". Little granite. Soft granite bottom.
C5	7	3.5	1' O/B Wash 50% stones. Soft granite bottom.
C6	8	1.8	1' O/B Wash 70% stones up to 9" diam. Partly iron cemented. Hard granite bottom.
C7	2	ND	Little Wash. Hard granite.
C8	9*	4.5	3' O/B (tailings). Wash 75% stones.
C9	5	1.4	2' O/B Wash 75% stones up to 9" Hard granite bottom.
D1	9'6"	2.4	2' O/B Wash 85% stones up to 24" Hard granite bottom.

HOLE NO.	DEPTH (Ft.)	VALUE (oz/c. yd. of 70% Conc.)	DETAILS
D2	8	0.6	2' O/B Wash 60% stones up to 12" cut and fill with pug. Granite 1% Hard granite bottom.
D3	12	2.1	2' O/B Wash 55% stones mainly 6" diam. Granite 2%. Hard granite bottom.
D4	16*	1.6	2' O/B Wash 65% stones. Large granite boulders 5%
D5	10	3.5	Wash 80% stones up to 9" diam. Large granite boulders 4%. Soft granite bottom.
E1	4	ND	1' O/B, 2' hard cemented sand, 1' wash. Hard granite bottom.
E2	12	4	2' O/B Wash 20% stones. Large granite boulders up to 3' diam. (5%). Hard granite bottom.
F1	9	1	3' O/B Wash 75% stones up to 12". Granite 5%. Hard granite bottom.
F2	15*	3.2	5' O/B Wash 75% stones up to 18" diam. Granite 15%.

* Not bottomed.

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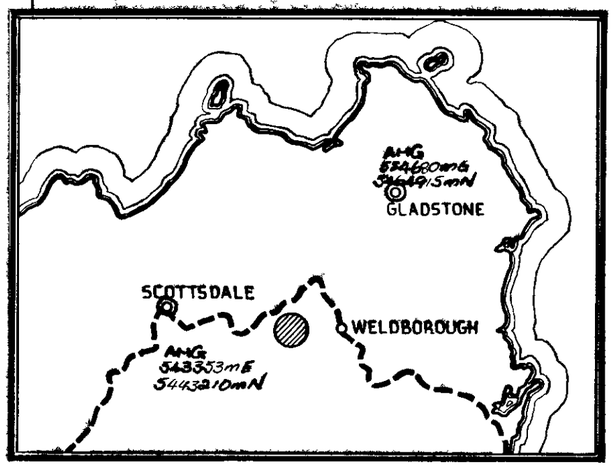

AMG REFERENCE POINTS ADDED

223007

N

MAG

WORKINGS

OLD

LINE "A"

LINE "B"

LINE "C"

LINE "D"

LINE "E"

LINE "F"

A1 4 2 6'
A2 14 3 6'
A3 2 3 10'
A4 4 3'
B8 20 6'
B7 3 6'
B6 22 7'
B5 1 8'
B4 12 10'
B3 3 11'
B2 2 7'
B1 15 6'
C9 1 4 5'
C8 4 5 12'
C7
C6 1 8 8'
C5 3 5 7'
C4 3 6 10'
C3 1 6 16'
C2 2 5 10'
C1 3-5 5'
D6
D5 3 5 10'
D4 1 4 16'+
D3 2 1 12'
D2 0 6 8'
D1 2 4 9'
E2 4 12'
E1 Tr
F2 3 2 15'+
F1 1 9'

HUT

OLD RINGARDOOMA – WELDBOROUGH RD.

TO BRANXHOLM

TO RINGARDOOMA

Black Creek

OLD SHAFT

BARNETT'S WORKINGS

OLD SHAFT

GRANITE

PIT □ OZS/CU YD 70% CONC
DEPTH IN FEET

5 cm

66-416

DEPARTMENT OF MINES – TASMANIA

BELLS PLAINS ALLUVIAL AREA – VIC WELDBOROUGH

DATE MARCH 1966	SCALE FEET 0 300
GEOLOGIST T D HUGHES	SURVEYOR
DRAUGHTSMAN P NANKIVELL	MAP SHEET & N° A'ROOMA 32
REVISIONS	FILE N° 2831

200,000 cu yds @ 3oz = 200,000 lb 100 tons