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GEOPHOTO MINERALS REPORT 1973/11

EVALUATION OF THE WYNIFORD RIVER ALLUVIAL TIN PROSPECT - E.L.6/68, N.E. TASMANIA

MICROFILMED

Prepared by

GEOPHOTO RESOURCES CONSULTANTS

for

TEXINS DEVELOPMENT PTY. LIMITED

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INTRODUCTION

This report deals with the backhoe testing of the Quaternary/Tertiary river gravels completed during April/May 1973. It covers the details of the programme, as it was conducted in the field, and reviews the results obtained from this programme.

This report should be read in conjunction with Geophoto Minerals Report 1973/9 which covers the broad background history of Texins involvement in this area and outlines the programme as it was envisaged at that time. These aspects will not be dealt with again in this report.

LOCATION AND ACCESS

The area lies approximately 1 mile to the south-east of Pioneer, the prospect grid following the Wyniford River for 2600 metres.

Access is good via the Tebrakunna Road from Pioneer and the Three Notch Road which follows the Wyniford River along its total length within the prospect area.

Location maps A-188 and A-200 best illustrate the position of the area in relation to access tracks and settlements, and, other prospects within the alluvial tin programme.

THE PROGRAMME OF BACKHOE TESTING

The preliminary programme of backhoe testing of the Quaternary/Tertiary river gravels commenced on Wednesday, 4th April, finally being terminated on Monday, 7th May. Within this period the backhoe was employed for 13½ days.

A total of 172 pits were dug at 15 metre intervals along lines spaced at 200 metres.

The originally proposed programme envisaged 225 pits over 14 lines (2600 metres). This programme was, however, modified from day to day as the holes were dug and additional data collected.

Of the 172 holes dug, 152 were channel sampled with the remaining 20 holes merely put down for observation purposes. A number of holes were omitted from the programme either because they no longer served any useful purpose or, when the weather broke towards the end of April, their locations became inaccessible without considerable additional expenditure, i.e. bulldozer work.

Sampling where no distinct geological units could be distinguished was over 1.5 metre intervals. Alternatively where lithological changes could be identified then these governed the sample intervals.

A total of 300 samples were recovered, these being processed at St. Helens. Volumes were determined by water displacement, before panning of the samples to reduce them to heavy mineral fractions. The total 300 such fractions were forwarded to Brisbane for assay for tin (G.R.C. 5 and 105).

All assays were converted to grade (lbs/cu.yd. SnO_2) assuming a 72% Sn concentrate as the final marketable product.

(Although the field work was conducted using metric measurements, it was decided to revert to Imperial rather than

Metric standards in the calculation of grade and indicated reserves).

Additional field work included the surveying of the baseline using theodolite and stadia rod with an arbitrary R.L. of 100 metres set at the 00 + 00 Datum Peg. This work proved time consuming due to the often heavily timbered nature of the country. Consequently the turn-offs and pit locations were surveyed in using compass, tape and Abney level.

The survey work provided a topographical control for sectional drawing of the backhoe lines. Included on these 14 sections (attached to report) was all relevant lithological data, sample intervals and calculated grades - (Drawing A-190 5 Sheets).

Also completed (and attached to report) were three plan locations of the sample pits and additional geological data obtained from the sampling programme - Drawing A-189 (3 Sheets).

A study of these sections and maps/plans illustrate the main findings of the programme which are discussed in the following paragraphs.

RELEVANT DATA OBTAINED FROM THE BACKHOE TESTING

The gravels (sand/grit/wash pebbles) which were the main target for the testing in that they held the greatest potential of being tin bearing, proved the most difficult to sample. They remain unconsolidated and therefore are subject to slumping when exposed in the backhoe pit. The safety factor was therefore a major one in the sampling of these alluvials. Further, in many instances, the slumping prevented excavation to a granite basement and the sampling of basal sections.

The maximum depth to decomposed granite was 5.5 metres with an average depth of 2.4 metres for the holes sampled. This average depth was greater than the depth originally used as an estimate in the preliminary calculations of possible yardage (i.e. 6 feet), in spite of the fact that over half of the holes (95) failed to reach a granite basement. The average depth would certainly be in excess of 3 metres.

This appears encouraging but, at the same time, it must be borne in mind that within virtually all the holes there were horizons (i.e. clay, dirt bands, heavy wash of 95% stone, tailings) which are unproductive regarding tin values. Many of these horizons were sampled to check and verify this assumption.

While the overall depth of the ground proved greater, the area extent of the gravels was found to be more restricted than originally anticipated. In several areas the gravels were found to be superficial only, extending to no great depth.

However, the depth to which old mines have been worked poses a problem. Often having passed through these tailings one encountered obviously unworked gravels. In many holes, however, the tailings were never bottomed due to continual slumping of the sides of the pits. The size of boulders within the gravels would have proved a problem to operators when material required lifting by blower or gravel pump. Further, many small operators would only have worked ground which did not require lifting and the associated capital outlay on equipment. In either case there is a distinct possibility that ground might only have been worked to a certain level with basal sections remaining unworked.

Reports acquired from the Mines Department failed to throw any light on this problem, the data being largely production figures rather than details of the operations themselves.

REVIEW OF GRADE AND POTENTIAL YARDAGE CALCULATIONS

The summary (attached - appendix I) is an analysis of the results, selecting both holes which carry significant values and holes which must be considered if some continuity and meaning is to be derived from the results as they stand at the moment.

Each line has been dealt with separately and an average grade, depth and overburden depth (if applicable) calculated for that line with regard to the Quaternary and Tertiary sediments and tailings where these three units can be distinguished. For convenience the Quaternary deposits (together with tailings) and Tertiary deposits are treated separately.

QUATERNARY (TAILINGS)

The Quaternary deposits, comprised of sands, grit and wash predominantly, with occasional clays and silts, can be identified along each line sampled.

On a plan of the area they appear as a thin band, roughly following the present course of the Wyniford River with a fairly consistent width of 60 to 90 yds.

Spaced as they are the sample lines are too far apart to gain any worthwhile intrepretation of yardage by dealing with zones of influence for individual holes.

Therefore an average grade and depth has been calculated for each line and this line has been given a zone of influence i.e. 100 metres (109 yds) north and south.

This method is fraught with pitfalls when dealing with a mineralisation as patchily distributed as in an alluvial tin deposit but is the only possible means to obtain some indication of potential yardage and grade. We must assume that 14 lines are sufficient to reduce the potential error in our calculations to an acceptable level.

In appendix II, the grades and yardage within the zone of influence for each line are listed.

On lines K and M, due to access problems, the Quaternary deposits were not sampled. From data obtained regarding depths and lateral extent of the Quaternary on lines J,L and N, figures were computed for K and M lines.

A total yardage of 460,200 cu. yds is indicated within the zones of influence of lines A to O with an average grade of 0.54 lbs/cu. yds. SnO_2 to an average depth of 1.73 yds.

The yardage can reasonably be expected to be larger since 38 of the 59 holes used in deriving this figure failed to attain a basement of either granite or Tertiary sediments. Further basal sections are often found to carry the more significant tin values in alluvial tin deposits as a whole although this cannot be taken as a hard and fast rule for this area as there is insufficient evidence to support it.

TERTIARY

It is not feasible to deal with the Tertiary sediments in the same way as has been done with the Quaternary for various reasons, these being:-

(a) that in certain sectors these have been extensively worked out (Garibaldi, Upper and Lower Rajah Mines) with the exact limit of these workings being masked by tailings - often after passing through tailings unworked Tertiary washes were found.

(b) Being older and therefore deeper they were often insufficiently sampled or not reached at all due to slumping and flooding of the pits.

The following is a summary of the possible yardage and grade of Tertiary leads treated line by line.

LINE A

A minor lead was defined within Hole 2 carrying an average grade of 0.59 lbs/cu. yd. over 1.53 yds.

The tailings mask the course of an old Tertiary lead, probably extensively worked out.

Shallow Tertiaries in Hole 11 to 14 carry subeconomic values to 0.31 lbs/cu. yd. SnO_2.

LINE B

The Tertiary lead was not defined as such.

Shallow deposits lying above granites recorded subeconomic values to 0.29 lbs/cu. yd. SnO_2.

LINE C

Again the lead is not defined. The holes failed to reach the Tertiary sequences below the recent gravels.

Shallow deposits (Hole 28) and the deeper clays and sands of Holes 80 to 87 failed to carry significant values (to 0.12 lbs/cu. yd. SnO_2), although old workings appear over large areas close by.

LINE D

The Tertiary lead had been worked out (Holes 91 to 93) and shallow deposits on the west bank record values to only 0.21 lbs/cu. yd. SnO_2 excepting Hole 36 which carried a value to 0.64 lbs/cu. yd. SnO_2.

LINE E

Fairly well defined leads are present but subeconomic values to 0.17 lbs/cu. yd. SnO_2 were recovered. Again the important holes failed to attain a granite basement.

LINE F

Three distinct leads were identified, one with good possibilities of proving up further yardage, one creating speculation rather than providing additional ground and the third poorly defined, narrow and of limited thickness.

(a) Holes 54/55/56 (52/53?)
The width of this lead would be of the order of 50 to 82 yds. Approximately 60 yds to the south lies a large area of tailings representing worked sections of this lead. To the north Line E has no indication of economic values although basal washes were not adequately sampled.
Worked on a length of 130-150 yds. one would be looking at between 9,000 to 17,000 cu. yds. However, this is speculation since the depth

width and length of the unworked lead is uncertain.
The grade is good (average 1.28 lbs/cu. yd. SnO_2) over an average depth of 1.42 yds and beneath an average overburden of 4.54 yds.

(b) <u>Hole 96</u>
This lead carried a good grade (2.41 lbs/cu. yd. SnO_2) over 1.75 yds beneath an overburden of 3.5 yds. It has been worked out from approximately 100 yds. north, northwards and possibly below the tailings of holes 43 to 45 and recent gravels of Hole 95. Further testing would be necessary to establish this as so.

(c) <u>Hole 49</u>

At this time this lead carries no real significance.

The remaining Tertiary sediments along this line failed to record values above 0.42 lbs/cu. yd. SnO_2.

<u>LINE G</u>

The limits of Tertiary lead were defined in Holes 66 to 70 but the basal washes were not adequately sampled. Only one sample was recovered from the wash (<0.05 lbs/cu. yd. SnO_2). All holes failed to reach a basement with water flowing in consistently as the holes were dug. Samples recovered from these basal sections had either been washed of the smaller grain sized material (sand/silt) or were contaminated by the sands from above.

The whole area has been picked over by the old miners and how much ground is left unworked is difficult to assess.

LINE H

Ill-defined Tertiary leads can be distinguished, the main going beneath hole 108. Basal washes were again poorly sampled but with grades ranging from 0.12 to 2.77 lbs/cu. yd. SnO_2.

An average grade of 0.47 lbs/cu. yd. SnO_2 with an average over burden of 1.52 yds is indicated. All holes failed to attain a granite basement.

LINE J

Again as in the case of Line F two Tertiary leads, with basal washes carrying average or good values, were sampled but their depth and lateral extents remain uncertain.

Hole 120 gave values of 3.05 lbs/cu. yd. SnO_2 over 1.53 yds. but failed to reach bottom while Hole 119 failed to extend past the Quaternary gravels therefore leaving doubt over what lies beneath this hole and the tailings of Holes 110 to 112.

The lower sample of Hole 117 was taken from a basal wash giving a value of 0.65 lbs/cu. yd. SnO_2.

LINE K

No values of significance were obtained from this line. The Tertiary lead (Holes 135-137) has been worked out while the lead worked on the west end of the line in the Garibaldi Mine remained untested due to access problems.

LINE L

Holes 124 and 125 revealed granite washes in their basal sections grading 0.12 - 0.66 lbs/cu. yd. SnO_2. To the east they appear to have been worked out with tailings apparent in Hole 123 and to the southeast.

A second lead has been worked to the east of the Line (Holes 129 - 131) but bo basal sections were revealed in these holes due to the limited depths reached.

LINE M

Holes 139 to 141 revealed good values to 4.00 lbs/cu. yd. SnO_2, averaging 1.96 lbs/cu. yd. SnO_2 over 0.84 yds depth (average) with an overburden of 2.62 yds. in thickness. All holes did not attain a granite basement leaving the true depth open to speculation. From the results a yardage of approximately 8,000 - 10,000 cu. yds. might be expected within the zone of influence of Line M, this not considering a greater depth for the wash sections.

LINE N

On this line it is difficult to distinguish with any degree of certainty between Tertiary and Quaternary deposits and for this reason the yardage within the zone of influence of this line has been included with the Quaternary/Tailings yardage previously discussed.

Hole 152 however, carried good values within distinctly Tertiary basal sections averaging 1.06 lbs/cu. yd. SnO_2 over 1.09 yds.

LINE O

A similar situation exists here, as with Line N, with only one hole (148) carrying basal wash of distinctly Tertiary origin. The average grade is 1.58 lbs/cu. yd. SnO_2 between 1.21 and 3.25 yds depth. This may be representative of values to be found in unworked sections a further 34 yds to the east of Hole 148. Similar Tertiary sequences can be distinguished extending to the south which may offer prospects of unworked Tertiary washes. Tertiary sediments on the west bank were not sampled due to access problems.

Between a point midway between Line L and Line M, and the B.M.I. lease to the south, there could be in the order of 22,000 to 28,000 cu. yds., going an average of 1.65 lbs/cu. yds. SnO_2 below an average overburden averaging 2.38 yds. in thickness.

Added to these yardages approximately 9,000 to 17,000 cu. yds. from the main lead on Line F and we have an overall yardage of 31,000 to 45,000 cu. yds of Tertiary basal washes carrying grades from 1.28 lbs/cu. yd. SnO_2 to 1.65 lbs/cu. yd. SnO_2.

Additional yardage could be added to these figures to substantially increase them but not without speculation over and above that used in the above derived figures.

Considerably more holes, more closely spaced, would be needed to give the additional data required to tie in the numerous loose ends, not necessarily their courses which have been fairly well established, but questions upon grade and thickness of basal washes (15 out of 18 holes used in Appendix I did not attain a granite basement) and the extent to which they have been worked out.

Overall

The figure for the Quaternary/Tailings area stands at

460,200 cu. yds. going 0.65 lbs/cu. yd SnO_2, this figure failing to take into consideration the additional depth which certainly exists and possibly higher grades which may be found in basal sections.

Selecting a cut-off grade based on operating costs is difficult when no comprehensive review has been made of these costs for other operations in the N.E. Tasmania or in applying them to any operation we might envisage for this area.

Local small operators with gravel pump/sluice or jigs set up work ground down to 6 ozs/cu. yd. SnO_2 (35¢/cu. yd) while a breakdown of B.M.I. costs reportedly gives an operating cost in excess of 50¢/cu. yd. (0.55 lbs/cu. yd.).

If we use this higher figure of 0.55 lbs/cu. yd. SnO_2 as the cut-off value then only four of the lines (A,B,G and J) carry values of economic significance for the Quaternary deposits. Taking these four lines with their zones of influence, the potential yardage is cut to 145,700 cu. yds. with an average grade of 1.03 lbs/cu. yd. SnO_2 to an average depth of 2.22 yds. Again this figure will definitely be larger when the true depths are considered and possibly of higher grade if the basal sections carry significant values.

The overall figure has been cut by approximately 70% from 460,200 to 147,800 cu. yds.

Naturally we cannot move in and mine those Quaternary deposits within the zones of influence of Lines A,B,G and J as further lines within these zones would undoubtedly prove to be of different grade. However, the overall picture when lines A to O are considered shows that within this section it is probable that yardages in the order of 148,000 cu. yds. may be found, probably in a number of pockets, but amounting to around this figure or greater (extended to actual depth).

Added to this figure may be further yardages of Tertiary origin in the form of buried leads.

Thus we are looking at an area which is likely to yield a larger yardage, and of higher grade, than that found in the drilling of the Dorset Flat last year.

If it is considered the Dorset Flat is a viable entity in itself then this area does hold potential of extending that viability by providing possible further reserves.

Further this area tested at the Wyniford River is the central section only and can be extended a total of 1800 to 2000 metres north and south until the Argus Bridge is approached in the north and the river becomes more incised in the south with a limited flood plain.

For the Wyniford River we may be looking from present indications at a figure of the order of 400,000 cu. yds. (Quaternary/Tailings) going 1 lb/cu. yd. SnO_2 or over, this figure arrived at by considering that we have only looked at 55% of the ground and the depth is certainly greater than the 2.22 yds established to date.

Should a study of operating costs determine that the working of lower grades is feasible then this yardage could be increased.

If the yardages and grades indicated are considered adequate to support a mining venture in conjunction with reserves proven on other prospect areas i.e. Dorset Flats, Swains Creek, South Mt. Cameron, then further work is necessary on this prospect to define the pockets of tin bearing ground more accurately within the area already tested and north and south of it.

The decision to go ahead should not be made without due consideration of the cost since the new lines should be no more than 70 metres apart to gain the necessary information to evaluate the deposits and then go ahead and mine on basis of this data.

Thus a total of 200 - 240 holes are estimated as being required to achieve this within the section already tested with no extensions north and south.

With the cost of digging and sampling the 172 holes already completed, standing in the order of $8,000 (for the hire of the backhoe, the dozing, a geologist's time in mapping, surveying, sampling, logging, report writing etc., one field assistant sampling, pegging etc. two field assistants processing samples and assay costs) the cost of the new programme would be of the order of $12,000 - $14,000 and this not including assessment to the north and south, probably another $6,000 to $8,000.

The time to complete this programme would be of the order of 1½ - 2 months for the field work of backhoe digging and channel sampling.

One problem which must be considered is that further backhoe sampling, although supplying further data, will not tie up the loose ends mentioned above i.e. the actual thickness of the Quaternary deposits and the sampling the basal sections and also the extent of Tertiary washes beneath the tailings and Quaternary deposits.

This raises the question as to whether a drill would not be more beneficial in providing this information. However, with size of stone encountered in many of the backhoe holes could inhibit the use of the conventional cable tool percussion rig using a 5" or 6" casing.

A Conrad Pit Digger, if one could be obtained, would be more ideal but with its slow rate of penetration (3-4 feet per hour in loose sands and gravel) the programme would be prolonged another 3 months to complete the testing this same central section, also at a greatly increased cost, estimated at $32,000 (cost of a drill at approximately $130 per day) for the total five months work. This sum must be increased if the extensions north and south are to be tested.

The size of the hole the Conrad would dig (10,15 or 20 inch diameter) would further add to the time factor in that the samples would be considerably larger than those at present being processed. Present methods would have to be modified to cope with these samples.

A compromise between drilling and backhoe pitting is probably the solution.

The backhoe work on the central section could be cut back to 100 - 120 holes by widening the spacing between individual holes on the new lines, with a drill used to obtain results necessary regarding the grade of basal sections of both the Quaternary and Tertiary.

Initially the desirability of proving this type and size of deposit must be reassessed in the light of present company policy.

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APPENDIX I

SUMMARY OF ASSAY RESULTS

Abreviations:

D - Depth of Interval (yds)

AV.GR- Average Grade (lbs/cu.yd. SnO_2, 72% Sn Conc)

W.Z.I.- Width of Zone of Influence

OVERB- Depth of Overburden

* - Hole not bottomed.

LINE 0

Td./Qd.? Holes 142 to 146 - 82 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.
142	* 1.64(0-1.64)	0.13	0.216
143	* 1.42(0-1.42)	0.20	0.278
144	* 1.42(0-1.42)	0.82	1.164
145	* 1.74(0-1.74)	0.24	0.404
146	* 1.42(0-1.42)	0.26	0.372
	7.64		2.434

Av. Depth 1.62 yd Av. Grade 0.32 lbs/cu.yd.

Td. Hole 148 - 16 yds (50 yds) (W.Z.I.)

Hole	Depth	Av. Gr.	OVERB.
148	* 2.08(1.20-3.28)	1.58	1.20

Av. Depth 2.08 yds Av. Grade 1.58 lbs/cu.yd Av. Overburden 1.20 yds

LINE M

Td. Holes 139 to 141 - 50 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.	OVERB.
139	* 0.98(2.08-3.06)	0.93	0.909	2.08
140	* 0.44(2.84-3.28)	0.56	0.244	2.84
141	* 1.09(2.95-4.04)	3.45	3.770	2.95
	2.51		4.923	7.87

Av. Depth 0.84 yds Av. Grade 1.96 lbs/cu.yd Av. Overburden 2.62 yds

LINE N

Td./Qd.? Holes 149 to 152 - 6 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.	OVERB.
149	* 0.66(1.31-1.97)	0.31	0.201	1.31
150	* 0.55(1.53-2.08)	0.38	0.207	1.53
151	Not reached			
152	* 1.09(2.84-3.93)	1.06	1.162	2.84
	2.30		1.570	5.68

Av. Depth 0.77 yds Av. Grade 0.68 lbs/cu. yd. Av. Overburden 1.89 yds

Tailings Holes 149 to 151 - 50 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x. D.	OVERB.
149	1.31(0-1.31)	0.40	0.524	
150	1.53(0-1.53)	0.07	0.107	
151	2.08(0-2.08)	0.93	1.928	
	4.92		2.559	

Av. Depth 1.64 yds Av. Grade 0.521bs/cu.yd

Combined Tailings/Qd.? Holes 149 to 151 - 50 yds (W.Z.I.)

Av. Depth 1.75 yds Av. Grade 0.49 lbs/cu.yd.

LINE K

Td. Hole 134 - 16 yds (W.Z.I.)

Hole	Depth	Av. Gr.
134	1.42(2.64-4.04)	0.32

Av. Depth 1.42yds Av. Grade 0.32 lbs/cu.yd.

LINE L.

Qd. Holes 121 to 123, 127 to 130 - 115 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.
123	* 2.51(0-2.51)	0.20	0.502
122	* 1.64(0-1.64)	0.25	0.410
121	* 1.53(0-1.53)	0.70	1.069
127	* 1.21(0-1.21)	0.54	0.650
128	* 1.86(0-1.86)	0.56	1.042
129	* 1.42(0-1.42)	0.05	0.071
130	* 0.87(0.87-1.74)	0.24	0.210
	11.06		3.954

Av. Depth 1.58 yds Av. Grade 0.36 lbs/cu.yd.

Holes 121 to 122, 127 to 128 - 66 yds (.W.Z.I.)

Av. Depth 1.56yds Av. Grade 0.51 lbs/cu.yd.

Td. Holes 124 to 125 - 33yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.	OVERB.
124	0.55(2.51-3.06)	0.66	0.361	2.51
125	1.09(3.06-4.15)	0.12	0.131	3.06
	1.64		0.492	5.57

Av. Depth 0.82 yds Av. Grade 0.30 lbs/cu.yd Av. Overburden 2.78 yds

LINE J

Qd. Holes 113 to 115 - 50 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.
113	1.74(0-1.74)	0.13	0.239
114	2.08(0.2.08)	0.86	1.784
115	1.64(0-1.64)	0.29	0.476
	5.46		2.499

Av. Depth 1.82 yds Av. Grade 0.46 lbs/cu.yd.

Qd. Hole 119 - 16 yds (W.Z.I.)

Hole	Depth	Av. Gr.
119	* 0.77(0-0.77)	2.24

Av. Depth 0.77 yds Av. Grade 2.24 lbs/cu.yd.

Td. Hole 120 - 16 yds (W.C.I.)

Hole	Depth	Av.Gr.	OVERB.
120	* 1.53(2.62-4.15)	3.05	2.62

Av. Depth 1.53 yds Av. Grade 3.05 lbs/cu.yd Av. Overburden 2.62yds

Td. Hole 117 - 16 yds (.W.Z.I.)

Hole	Depth	Av. Gr.	OVERB.
117	* 0.44(3.28-3.72)	0.65	3.28

Av. Depth 0.44 yds Av. Grade 0.65 lbs/cu. yd Av. Overburden 3.28 yds

LINE G.

Qd. Holes 64,98 to 101 - 83 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.
64	* 2.51(0-2.51)	1.65	4.142
98	* 1.86(0-1.86)	5.00	9.300
99	* 1.09(0-1.09)	0.73	0.798
100	* 1.64(0-1.64)	0.14	0.229
101	1.09(0-1.09)	0.97	1.061
	8.19		15.530

Av. Depth 1.64 yds Av. Grade 1.90 lbs/cu.yd.

LINE H.

Qd. Holes 103 to 108 - 94 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.
103	0.98(0-0.98)	0.05	0.049
104	* 2.51(0-2.51)	0.04	0.101
105	1.97(0-1.97)	0.02	0.047
106	2.29(0-2.29)	0.05	0.115
107	0.87(0-0.87)	0.10	0.087
108	2.73(0-2.73)	0.29	0.786
	11.35		1.185

Av. Depth 1.90 yds Av. Grade 0.10 lbs/cu. yd

Td. Holes 103 to 108 - 94 yds (W.Z.I.)

Hole	Depth	Av. Gr.	Gr. x D.	OVERB.
103	* 2.08(0.98-3.06)	0.18	0.373	0.98
104	Not Reached			
105	* 0.87(1.97-2.84)	1.49	1.317=	1.97
106	* 1.42(2.29-3.71)	Not sampled		2.29
107	* 0.98(0.87-1.85)	0.18	0.177	0.87
108	Not reached			
	5.35		1.867	6.11

Av. Depth 1.34 yds Av. Grade 0.47 lbs/cu.yd. Av. Overburden 1.53 yds

LINE F

Qd. — **Holes 46/47 - 33yds (W.Z.I.)**

Hole	Depth	Av. Gr.	Gr. x D.
46	* 1.97(0-1.97)	0.16	0.306
47	* 3.06(0-3.06)	0.16	0.498
	5.03		0.804

Av. Depth 2.51 yds — Av. Grade 0.16 lbs/cu.yd.

Tailings — **Holes 43/44/45 - 50 yds (W.Z.I.)**

Hole	Depth	Av. Gr.	Gr. x D.
43	* 1.53(0-1.53)	0.51	0.778
44	* 1.86(0-1.86)	0.24	0.445
45	* 1.53(0-1.53)	0.20	0.327
	4.92		1.550

Av. Depth 1.64 yds — Av. Grade 0.31 lbs/cu.yd.

Combined Tailings/Qd.

Av. Depth 1.98 yds — Av. Grade 0.24 lbs/cu.yd.

Td. — **Hole 96 - 16 yds(W.Z.I.)**

Hole	Depth	Av. Gr.	OVERB.
96	* 1.74(3.49-5.23)	2.41	3.49

Av. Depth 1.74 yds — Av. Grade 2.41 lbs/cu.yd — Av. Overburden 3.49 yds

Td. — **Hole 49 - 16 yds (W.Z.I.)**

Hole	Depth	Av. Gr.	OVERB.
49	0.66(3.72-4.38)	1.30	3.72

Av. Depth 0.66 yds — Av. Grade 1.30 lbs/Cu.yd. — Av. Overburden 3.72 yds.

Td. — **Holes 56/55/54/53?/52? - 50 yds to 82 yds (W.Z.I.)**

Hole	Depth	Av. Gr.	Gr. x D.	OVERB.
54	* 1.53(4.48-6.01)	1.67	2.562	4.48
55	* 1.31(4.58-5.89)	0.81	1.060	4.58
	2.84		3.622	9.06

Av. Depth 1.42 yds — Av. Grade 1.28 lbs/cu. yds — Av. Overburden 4.53 yds.

LINE D

Qd. Holes 30/29/88/89/90 - 86 yds (W.Z.I.)

Hole	D.	Av.Gr.	Gr. x D.
30	* 2.41(0-2.41)	0.07	0.168
29	* 2.29(0-2.29)	0.07	0.161
88	* 0.87(0-0.87)	0.10	0.087
89	* 2.29(0-2.29)	0.25	0.574
90	2.62(0-2.62)	0.30	0.798
	10.48		1.788

Av. Depth 2.10 yds Av. Grade 0.17lbs/cu.yd

Holes 88/89/90 - 55yds (W.Z.I.)
Av. Depth 1.93 yds Av. Grade 0.25 lbs/cu.yd.

LINE E

Qd. Holes 37 to 42 - 92 yds (W.Z.I.)

Hole	D.	Av.Gr.	Gr. x D.
37	0.66(0-0.66)	0.29	0.191
38	* 2.95(0-2.95)	1.06	3.139
39	1.42(0-1.42)	0.01	0.020
40	3.82(0-3.82)	0.08	0.294
41	2.29(0-2.29)	0.27	0.619
42	0.98(0-0.98)	0.12	0.115
	12.12		4.378

Av. Depth 2.02 yds Av. Grade 0.36 lbs/cu.yd.

LINE B

Qd. Holes 15/16/74 - 60 yds (W.Z.I.)

Hole	D.	AV.GR.	GR. x D.
16	4.38(0-4.38)	1.55	6.582
15	* 2.18(0-2.18)	0.15	0.333
74	1.42(0-1.42)	0.55	0.780
	7.98		7.695

Av. Depth 2.66yds Av. Grade 0.97 lbs/cu.yd.

LINE C

Qd. Holes 26/25/77/78/79 - 88 yds (W.Z.I.)

Hole	D.	Av. Gr.	GR. x D.
26	2.08(0-2.08)	0.08	0.158
25	* 1.53(0-1.53)	0.17	0.261
77	* 2.08(0-2.08)	0.12	0.249
78	* 2.29(0-2.29)	0.10	0.229
79	* 2.18(0-2.18)	0.06	0.131
	10.16		1.028

Av. Depth 2.03yds Av. Grade 0.10 lbs/cu.yd.

LINE A

Qd. Holes 3 to 7 - 82 yds (W.Z.I.)

Hole	D.	AV. GR.	GR. x D.
3	2.29(0-2.29)	0.14	0.321
4	3.28(0-3.28)	0.50	1.623
5	* 2.51(0-2.51)	0.30	0.749
6	* 3.60(0-3.60)	1.94	6.990
7	2.73(0-2.73)	0.41	1.109
	14.41		10.792

Av. Depth 2.88 yds. Av. Grade 0.75 lbs/cu.yd

Td. Hole 2 - 16 yds (W.Z.I.)

Hole	D.	AV. GR.	OVERB.
2	* 1.53(2.95-4.48)	0.59	2.95

Av. Depth 1.53yds Av. Grade 0.59 lbs/cu.yd Av.Overburden 2.95yds

Tailings Holes 8 to 10 - 115yds (W.Z.I.)

Hole	D.	AV. GR.	GR. x D.
8	1.64(0-1.64)	0.03	0.045
9	* 2.18(0-2.18)	0.16	0.349
10	* 1.86(0-1.86)	0.95	1.768
	5.68		2.162

Av. Depth 1.88yds Av. Grade 0.38 lbs/cu.yd.

APPENDIX II

POTENTIAL YARDAGES AND AVERAGE GRADES

Abbreviations:

W.Z.I.	-	Width of Zone of Influence (Yds)
D.	-	Average Depth of 'Pay' Dirt (Yds)
Gr.	-	Average Grade (lbs/cu.yd. SnO_2, 72% Sn. Conc)
Y.	-	Potential Yardage. (Cu.yd)
Z.	-	Zone of Influence (Sq. Yds)

TAILING/Qd.

Line	W.Z.I.	Z.	D.	Gr.	Y.	Y x Gr.
A	82	18,000	2.88	0.75	52,000	38,900
B	60	14,500	2.66	0.97	38,800	37,600
C	88	18,600	2.03	0.10	37,700	3,770
D	86	19,100	2.10	0.17	40,100	6,810
E	92	19,700	2.02	0.36	39,800	14,350
F	83	18,300	1.98	0.24	36,200	8,700
G	83	18,500	1.64	1.90	30,400	57,800
H	94	19,500	1.90	0.10	37,000	3,700
J	66	15,200	1.61	0.64	24,500	15,670
(K	66	17,200	1.64		28,200	)
L	66	17,200	1.56	0.51	26,800	13,680
(M	66	14,000	1.64		23,000	)
N	50=	12,100	1.75	0.49	21,100	10,390
O	82	15,200	1.62	0.32	24,600	7,880
		237,100			409,000	219,250
					With K & M 460,200	

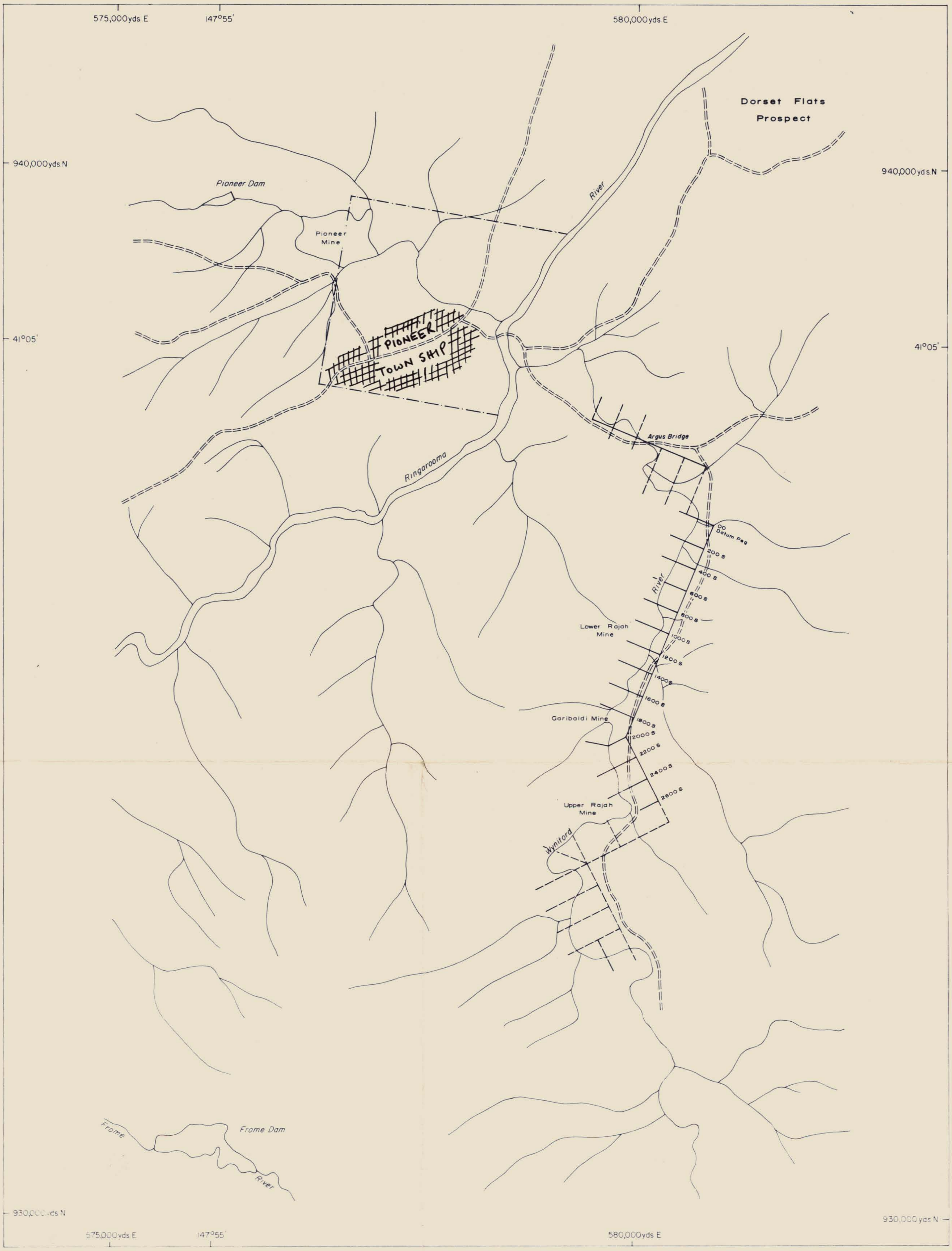
Yardage - 409,000 Cu. yds.
- 460,200 Cu. yds with Lines K & M projected

Average Grade - 0.54 lbs/cu. yd. SnO_2 (72% Sn. Conc)

Average Depth - 1.73 yds.

--oOo--

Assuming operating cost of approximately 50¢/cu. yd. - cut-off Grade 0.55 lbs/cu. yd. SnO_2.
Yardage - 145,700 cu. yds (from Lines A,B,G,J)
Average Grade - 1.03 lbs/cu. yd SnO_2 (72% Sn. Conc)
Average Depth - 2.22 yds.



74-1069

LEGEND

======	*Road, track*
~~	*Creek*
— — · —	*Excluded lease area (Pioneer)*
┴──┴──┴	*Completed grid*
┬ ┬ ┬	*Possible grid extension*

543031

Scale: 1 : 25,000

2000 0 2000 4000 6000 8000 Feet

1000 0 1000 2000 Metres

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E.L. 6/68 NORTH EAST TASMANIA.

2353

Wyniford River Alluvial Tin Prospect

LOCATION OF GRID

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July 1973	DWG No	A-188

1973/11

LEGEND

SHEET INDEX

1
2
3

Quaternary	Qd	Recent river gravels (wash) and sands (s - superficial only)
Tertiary	Td	Clays, silts, sand/grit ("drift"), wash (predominantly quartz) of fluviatile, estuarine or marine origin.
Devonian	Dg	Porphyritic adamellites / granites

——?—— Contact, dashed where indefinite, questioned where inferred.

——·—— Limit of tailings.

—Q— Lead; —T— Gutter (Approx. course): T - Tertiary; Q - Quaternary; T/Q - Tertiary or Quaternary, indefinite

Watercourse

Vehicle track

Mineral lease excluded from E.L. 6/68

WR11 2.34 — Preliminary prospect location - Sample No. - Value lb/cu.yd. SnO_2 (72% Sn conc.)

127 — Backhoe Pit Location (Channel Sampled)

Pit Location (Not Sampled)

Proposed Pit Location (Not dug due to access problems)

Scale : 1:2000

200 0 200 400 Feet

50 0 50 100 150 200 Metres

543032

5 cm

74-1069

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M.N.

E.L. 6/68 NORTH EAST TASMANIA.

2354

Wynniford River Alluvial Tin Prospect

BACKHOE PIT LOCATIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG Nº	A-189

1973/11

SHEET 1 OF 3

LEGEND

SHEET INDEX

1
2
3

Quaternary	Qd	Recent river gravels (wash) and sands (s - superficial only)
Tertiary	Td	Clays, silts, sand/grit ("drift"), wash (predominantly quartz) of fluviatile, estuarine or marine origin
Devonian	Dg	Porphyritic adamellites / granites

—?— Contact, dashed where indefinite, questioned where inferred

—·— Limit of tailings

—Q— Lead
—T— Gutter
(Approx course)

T - Tertiary
Q - Quaternary
T/Q - Tertiary or Quaternary, indefinite

Watercourse

Vehicle track

Mineral lease excluded from E.L. 6/68

WR11 2.34 Preliminary prospect location - Sample No - Value lb/cu yd SnO_2 (72% Sn conc)

127 Backhoe Pit Location (Channel Sampled)

Pit Location (Not Sampled)

Proposed Pit Location (Not dug due to access problems)

Scale: 1:2000

200 0 200 400 Feet

50 0 50 100 150 200 Metres

5 cm

74-1069

543033

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E.L. 6/68 NORTH EAST TASMANIA.

2355

M.N.

Wynniford River Alluvial Tin Prospect

BACKHOE PIT LOCATIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG Nº	A-189

1973/11

SHEET 2 OF 3

LEGEND

SHEET INDEX

1
2
3

Quaternary	Qd	Recent river gravels (wash) and sands (s - superficial only)
Tertiary	Td	Clays, silts, sand/grit ("drift"), wash (predominantly quartz) of fluviatile, estuarine or marine origin
Devonian	Dg	Porphyritic adamellites / granites

—?— Contact, dashed where indefinite, **questioned where inferred**

—·— Limit of tailings

—Q— Lead
—T— Gutter
(Approx course)

T Tertiary
Q - Quaternary
T/Q - Tertiary or Quaternary, indefinite

Watercourse

Vehicle track

Mineral lease excluded from E L 6/68

● WR11 2 34 Preliminary prospect location - Sample No - Value lb/cu yd SnO_2 (72% Sn conc)

● 127 Backhoe Pit Location (Channel Sampled)

○ Pit Location (Not Sampled)

◌ Proposed Pit Location (Not dug due to access problems)

Scale 1:2000

200 0 200 400 Feet

50 0 50 100 150 200 Metres

543034

5 cm

74-1069

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M.N.

E.L. 6/68 NORTH EAST TASMANIA.

2356

Wyniford River Alluvial Tin Prospect

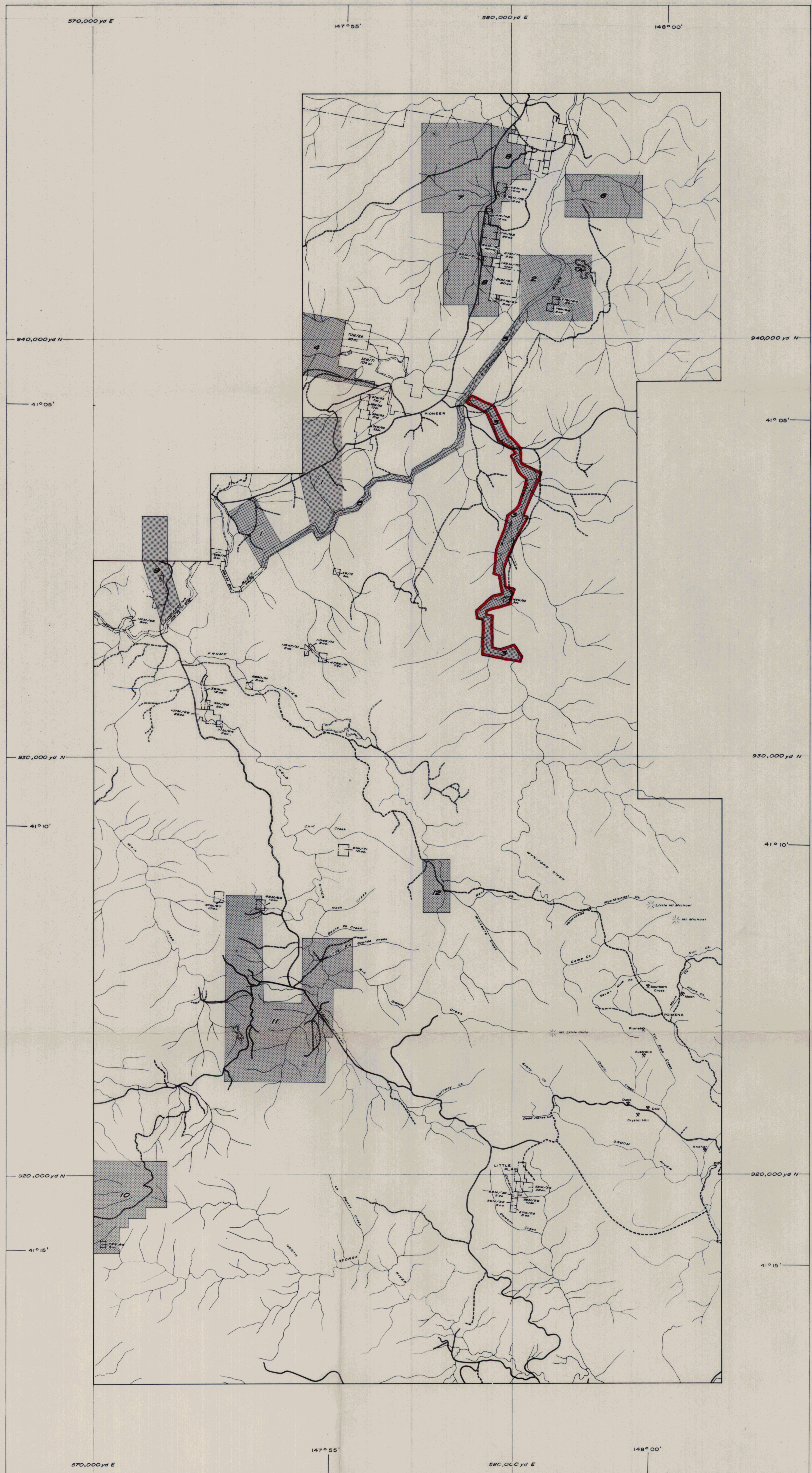
BACKHOE PIT LOCATIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG No	A-189

1973/11

SHEET 3 OF 3

Colour



LEGEND

Boundary of EL 6/68 - April '73.

Mineral Lease boundary excluded from EL 6/68.

Watercourse

Road

Vehicle track

PROSPECT AREAS	
1	Possible Deep Lead
2	Dorset Flat
3	Wyniford River
4	Pioneer Lead (Extensions)
5	Ringarooma River
6	Swains Creek
7	Eastern Leads
8	Shallow Marine / River Terraces
9	Echo Lead
10	Bald Hill (Eluvial)
11	Weldborough (Alluvial / Eluvial / Residual)
12	Emu Flat

Scale: 1 : 50,000

4000 0 4000 8000 12000 16000 Feet

2000 0 2000 4000 Metres

5 cm

543035 74-1069

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E.L. 6/68 NORTH EAST TASMANIA

2357

Alluvial Tin Prospect - Locations

(STATUS REPORT - 22ND MARCH 1973)

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	Nov. 1973	DWG Nº	A 200

1973/11

LEGEND

SOIL / LOAM / HUMUS	organic rich, generally clayey/silty	Qd	Quaternary
CLAY, MUD	feldspathic / micaceous	Td	Tertiary
SILT	feldspathic / micaceous	Dg	Devonian
SAND	generally coarse grained grading into GRIT (feldspathic / micaceous)		
Pebble WASH	generally well rounded of granite/adamellite, quartz, quartz-chlorite-greisen and basalt. <15 cm denotes maximum diameter. <15 cm <5cm denotes maximum diameter of 15cm but predominantly <5cm		
TAILINGS			
GRANITE	generally in decomposed state		

— — — geological contact

——CL—— lithological change

Channel sample

Other sample

0 25 Value of sample lb/cu yd SnO_2 (72% Sn conc)

R L Relative Level (Arbitrary 100m level at 00+00 Datum Peg)

Scale: Vertical 1:50 / Horizontal 1:300

543036

5 cm

74-1069

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E.L. 6/68 NORTH EAST TASMANIA.

2358

Wyniford River Alluvial Tin Prospect

BACKHOE PIT SECTIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG Nº	A-190

SHEET 1 OF 5

1973/11.

2359

LEGEND

SOIL / LOAM / HUMUS	organic rich, generally clayey/silty
CLAY, MUD	feldspathic / micaceous
SILT	feldspathic / micaceous
SAND	generally coarse grained grading into GRIT (feldspathic / micaceous)
Pebble WASH	generally well rounded of granite/adamellite, quartz, quartz-chlorite-greisen and basalt <15 cm denotes maximum diameter <15 cm <5cm denotes maximum diameter of 15cm but predominantly <5cm
TAILINGS	
GRANITE	generally in decomposed state

Qd	Quaternary
Td	Tertiary
Dg	Devonian
— — —	geological contact
——CL——	lithological change

I	Channel sample
|	Other sample
0.25	Value of sample lb/cu yd SnO_2 (72% Sn conc.)
RL	Relative Level (Arbitrary 100m level at 00+00 Datum Peg)

Scale: Vertical 1:50 / Horizontal 1:300

543037

5 cm

74-1069

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E.L. 6/68 NORTH EAST TASMANIA.

2359

Wyniford River Alluvial Tin Prospect

BACKHOE PIT SECTIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG Nº	A-190

SHEET 2 OF 5

1973/11

2360

LEGEND

SOIL / LOAM / HUMUS	organic rich, generally clayey/silty
CLAY, MUD	feldspathic / micaceous
SILT	feldspathic / micaceous
SAND generally coarse grained grading into GRIT	feldspathic / micaceous
Pebble WASH generally well rounded of granite/adamellite, quartz, quartz-chlorite-greisen and basalt. <15 cm denotes maximum diameter; <15 cm <5 cm denotes maximum diameter of 15 cm but predominantly <5 cm	
TAILINGS	
GRANITE generally in decomposed state	

Qd	Quaternary
Td	Tertiary
Dg	Devonian
— — —	geological contact
—CL—	lithological change

(bar with ticks)	Channel sample
(plain bar)	Other sample
0·25	Value of sample lb/cu yd SnO_2 (72% Sn conc)
R. L.	Relative Level (Arbitrary 100m level at 00+00 Datum Peg)

Scale: Vertical 1 : 50 / Horizontal 1 : 300

C48008 | 5 cm | 74-1069

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TEXINS DEVELOPMENT PTY. LTD.
E.L. 6/68 NORTH EAST TASMANIA.
2360
Wyniford River Alluvial Tin Prospect
BACKHOE PIT SECTIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG Nº	A-190

SHEET 3 OF 5

1973/11

LEGEND

- SOIL / LOAM / HUMUS organic rich, generally clayey / silty
- CLAY, MUD
- SILT } feldspathic / micaceous
- SAND generally coarse grained grading into GRIT
- Pebble WASH generally well rounded of granite / adamellite, quartz, quartz-chlorite greisen and basalt
  - <15 cm denotes maximum diameter
  - <15 cm <5cm denotes maximum diameter of 15cm but predominantly <5cm
- TAILINGS
- GRANITE generally in decomposed state

Qd	Quaternary
Td	Tertiary
Dg	Devonian
— — —	geological contact
——cL——	lithological change

- Channel sample
- Other sample
- 0·25 Value of sample lb / cu yd SnO_2 (72% Sn conc.)
- R.L. Relative Level (Arbitrary 100m level at 00+00 Datum Peg)

Scale Vertical 1 : 50 / Horizontal 1 : 300

543039

5 cm

74 - 1069

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E.L. 6/68 NORTH EAST TASMANIA.

2361

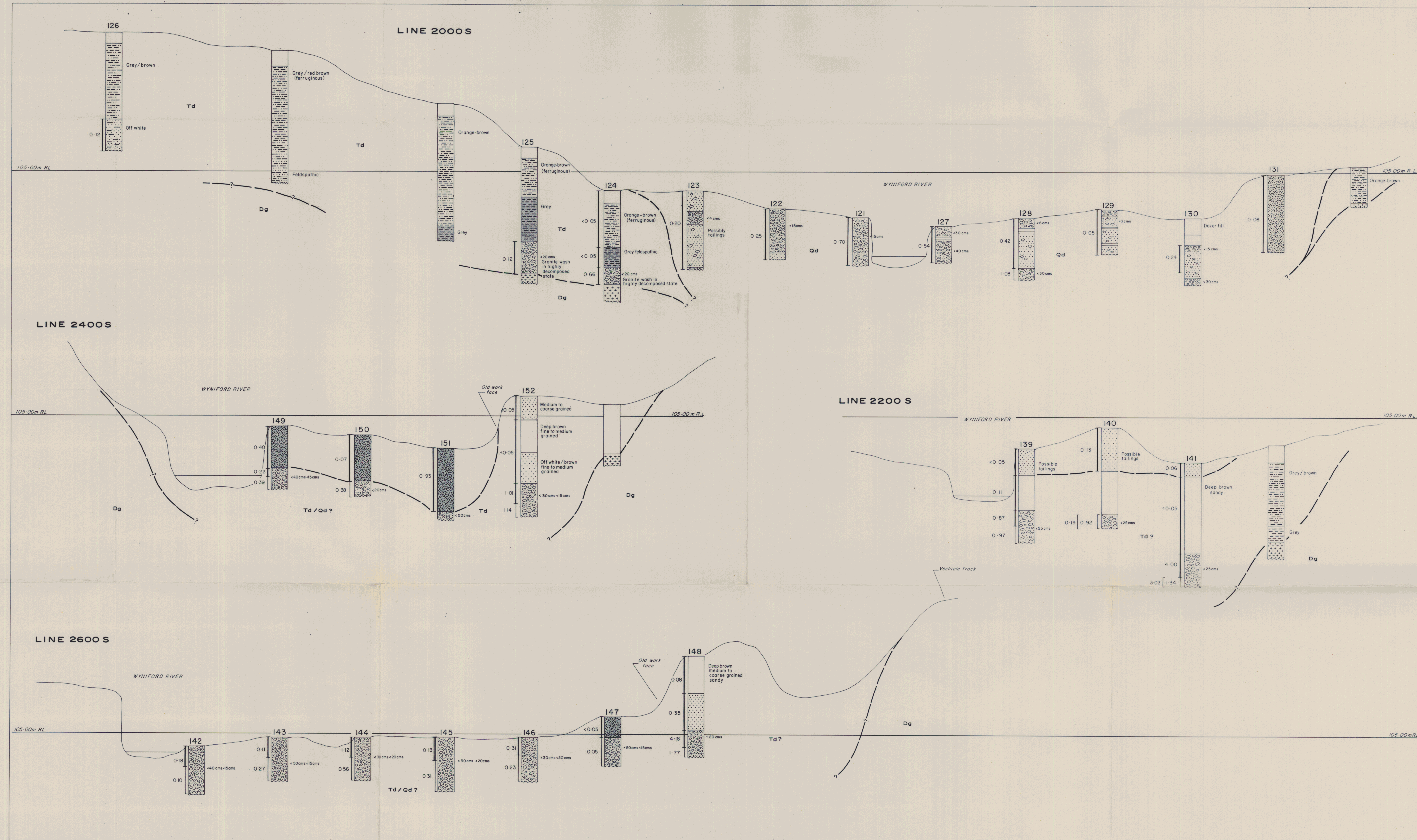
Wyniford River Alluvial Tin Prospect

BACKHOE PIT SECTIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG No	A-190

1973/11

SHEET 4 OF 5



LEGEND

SOIL / LOAM / HUMUS : organic rich, generally clayey/silty.	
CLAY, MUD	feldspathic / micaceous.
SILT	feldspathic / micaceous.
SAND : generally coarse grained grading into GRIT.	feldspathic / micaceous.
Pebble WASH : generally well rounded of granite/adamellite, quartz, quartz-chlorite-greisen and basalt. <15 cm denotes maximum diameter. <15 cm <5cm denotes maximum diameter of 15cm but predominantly <5cm	
TAILINGS	
GRANITE : generally in decomposed state.	

Qd	Quaternary
Td	Tertiary
Dg	Devonian
— — —	geological contact
——CL——	lithological change

	Channel sample
	Other sample
0·25	Value of sample lb/cu.yd. SnO_2 (72% Sn conc.)
R.L.	Relative Level (Arbitrary 100m level at 00+00 Datum Peg)

Scale: Vertical 1:50 / Horizontal 1:300

543040

5 cm

74-1069

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E.L. 6/68 NORTH EAST TASMANIA.

2362

Wyniford River Alluvial Tin Prospect

BACKHOE PIT SECTIONS

PROJECT	6/68	AUTHOR	I. Mortimore	DATE	July, 1973	DWG Nº	A-190

SHEET 5 OF 5

1973/11