AERIAL, GEOLOGICAL AND
GEOPHYSICAL SURVEY
OF
NORTHERN AUSTRALIA.

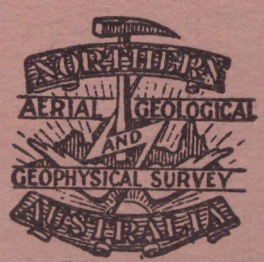
REPORT
NORTHERN TERRITORY No. 6.

GEOPHYSICAL REPORT ON THE MOUNT TODD AURIFEROUS AREA,

PINE CREEK DISTRICT,

BY

J. M. RAYNER, B.Sc., and P. B. NYE, M.Sc., B.M.E.



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AERIAL, GEOLOGICAL AND GEOPHYSICAL SURVEY OF NORTHERN AUSTRALIA.

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AERIAL, GEOLOGICAL AND GEOPHYSICAL SURVEY OF NORTHERN AUSTRALIA.

GEOPHYSICAL REPORT ON THE MOUNT TODD AURIFEROUS AREA, PINE CREEK DISTRICT.

I. INTRODUCTION.

The Mount Todd auriferous area is situated about seven miles north-east of Edith siding on the Darwin-Birdum railway. The portion of the area surveyed and described in this report is located about one and a half miles to the west of Mount Todd. The area contains two prominent reefs known as Jones Bros. and Tollis reefs. Jones Bros. reef is situated in the northern portion of the area, and the Tollis reef is situated one mile to the south of Jones Bros. reef.

The above two reefs have been proved to be auriferous, and Jones Bros. reef appears to offer prospects of being profitably mined and treated. A preliminary geological reconnaissance showed that there were extensive alluvial flats to the east of Jones Bros. reef and between the latter and the Tollis reef. It therefore appeared that geophysical surveys might reveal, under the alluvial flats, other reefs similar in nature to the Jones Bros. and Tollis reefs.

Two layouts were pegged, one covering an area to the immediate south of Jones Bros. reef, the second covering portion of the Tollis reef, in the vicinity of the shaft. The survey was commenced late in the year and heavy rainstorms, indicating the approach of the wet season, rendered it necessary for the party to leave the area before the roads became impassable. For the above reason the surveys were not as extensive as desired and a complete survey of the alluvial areas was not carried out. By leaving the field before the commencement of the wet season the party was enabled to journey to drier areas in Queensland and continue field work much later in the year than would otherwise have been the case.

Five plates were submitted with the Report of the Electrical Prospecting Company of Sweden, but only three plates are being reproduced herewith, as these show all the significant results. The two plates omitted are those showing the potential ratio profiles and the self-potential profiles of the Jones Bros. layout.

II. GEOLOGY.

The following geological notes are based upon the geological report of the Mount Todd area.*

The bedrock of the area consists of interbedded slates and sandstones belonging to the Pre-Cambrian system. The strikes of the rocks are generally in a north-south direction and the dips at high angles both to the east and west indicating a closely folded series. It is possible that one major anticline may be present in the northern portion of the area, and that it has a pitch to the south. The nose of the supposed anticline would occur on Jones Bros. layout.

Alluvium occupies considerable portions of the area to the east and south-east of Jones Bros. reef, and extends towards the Tollis reef. The greater portion of the Tollis reef outcrops in shallow alluvial flats.

The general strike of the reefs is approximately north and south, but that of the Tollis is north-west. The reefs conform to the bedding of the slates and sandstones both in strike and dip. The greatest departure from the north-south strike of the reefs is in the areas occupied by, and immediately to the north of, the Jones Bros. layout. The strikes and dips of the reefs in the latter portion of the area can be readily explained if they conform to the bedding around the nose of the suggested south-pitching anticline.

The reefs are of two types, namely, quartz-ironstone and white quartz reefs. The former type would be more appropriately called quartz-pyrite reefs because at depth they consist largely of pyrite. (It is now known that arsenopyrite exceeds pyrite in amount.)

* Northern Territory Report No. 5—The Mount Todd Auriferous Area.

Jones Bros. reef ranges in width from 12 to 36 inches, the average being 23 inches. Tollis reef ranges in width from 12 to 48 inches and in the shaft sunk on it has an average width of 23 inches.

The depth to water level is not known but on the ridge occupied by Jones Bros. reef it exceeds 100 feet. Sulphides, chiefly of primary origin, are present at the 80 feet level in the No. 2 shaft.

III. REPORT OF THE ELECTRICAL PROSPECTING COMPANY OF SWEDEN.

A. Analysis of Operations.

The geophysical survey, with Mr. R. F. Thyer as party leader, was carried out from 17th October, until 4th November, 1936. The survey was in the nature of a reconnaissance one.

Two layouts were pegged, the first covering an area of 84.9 acres to the immediate south of Jones Bros. reef, the second covering 4.1 acres and including portion of the Tollis reef in the vicinity of the shaft.

The total area covered by the survey was 89 acres. The total length of traverses surveyed geophysically was 25,100 feet. Eighteen working days were spent on the survey, giving an average of 1,394 feet of traverse surveyed per day. The speed of the survey was hampered by several rainstorms, and difficulties of transport, particularly in regard to supplies.

B. Nature of the Problem.

Extensive alluvial and gravel-covered flats with few outcrops masked much of the country to the east and south-east of Jones Bros. reef, and also the greater portion of the country traversed by the Tollis reef. It was considered possible, therefore, that reefs of the quartz and quartz-ironstone types might be present in these areas, their outcrops being obscured by the alluvial covering. Such reefs might be either continuations of the known reefs or else hitherto undiscovered reefs parallel to the former. In the case of Jones Bros. and adjacent reefs the southern continuations traversed country not covered by alluvium, and so the surveys on the Jones Bros. layout were carried out mainly with the object of locating parallel reefs. As regards the Tollis reef, the small area surveyed was devoted solely to the search for reefs parallel to the Tollis reef.

The problem therefore resolved itself into one of locating parallel reefs beneath shallow mantles of alluvium.

C. Methods Used.

The quartz-pyrite type of reef outcrops in the form of quartz-ironstone. It was considered that these reefs, as well as the white quartz type, would act as poor conductors in comparison with the country rock and that it would be possible to locate them by appropriate geophysical methods under shallow mantles of alluvium. The principal method used was, therefore, the potential ratio one, which is most suitable for detecting poor conductors close to the surface.

The highly sulphidic nature of the quartz-pyrite type of reef at depth and the oxidation of such reefs nearer the surface suggested that the self-potential methods might also be applied. In addition, magnetic surveys might have application in detecting reefs of the quartz-ironstone type.

The potential ratio method was therefore the principal one used in the survey, but in addition, some self-potential and magnetic surveys were carried out. Descriptions of the methods used have been given elsewhere.*

D. Tests Under Known Geological Conditions.

As the total number of traverses surveyed was small they might all be regarded as being in the nature of test traverses. They might therefore be appropriately described in one section only of this report and it is proposed to present the description in Section E (Results of the Survey).

It should be stated, however, that in the case of the traverses on the Jones Bros. layout portions of them were across low hills of slates and sandstones with outcropping reefs and the remainder were across alluvial flats. All that need be said in this section is that the strongest of the indications (corresponding to poor conductors) showed a direct correlation with the outcropping lines of reefs.

It should also be stated that very weak anomalies were obtained over the Tollis reef by the self-potential method, but that these were too irregular to be useful for purposes of interpretation.

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* Report (Queensland No. 3)—The Geophysical Methods of the Electrical Prospecting Company of Sweden used in the Aerial, Geological and Geophysical Survey of Northern Australia.

E. Results of the Survey.

The results of the potential ratio survey are shown in the form of an indication plan on plate 1, and by profiles on plates 2 and 3. The results of the self-potential and magnetic surveys on the Tollis layout are shown by profiles on plate 3.

The results will be described separately for the Jones Bros. and Tollis layouts. As the former layout contains a number of indications, the more important ones will be separately described. It should be remembered that the indications correspond to poor conductors and have probably been caused by reefs of either the white quartz type or the quartz-ironstone type (the latter representing the oxidised portion of the quartz-pyrite type).

(1) *Jones Bros. Layout.*—A number of poor conductor indications were obtained, the most pronounced arising from an outcropping reef worked in some old open cuts.

The indications have a general north and south trend and in the centre of the area agree closely in strike and position with the outcropping quartz-ironstone reefs. Other general features of the indications are the bends (or change in strike), and changes in intensity and character. A few of the indications are short, that is to say, they show a lack of continuity.

Four of the traverses surveyed were extended to 3,000 feet east of the base line. For the last 1,500 feet these traverses show low potential gradients (*see* plate 2) and small changes in the potential ratios, indicating that the depth of bedrock, or the thickness of the alluvial deposits, is increasing in that direction. No indications were obtained east of 1500E, due probably to the increased thickness of overburden.

(*a*) *Indication A.*—This indication extends throughout the layout from 600S/160W to 400N/25W. It is the strongest indication obtained on the layout. The line of indication is curved, being convex to the east. At its northern end the indication coincides with the outcrop of a quartz-ironstone reef striking 347°. This reef can be traced northwards to the vicinity of the Jones Bros. No. 5 shaft, but has not been proved to be a direct southerly continuation of the Jones Bros. reef. In the central portion of the indication, between traverses 0 and 400S, a quartz-ironstone reef outcrops approximately coincident with the line of indication and has been worked by several open cuts. The indication changes rapidly in intensity, the most pronounced indications being on traverses 250N and 600S, where no workings exist.

It should be noted that although the indication extends as far south as 600S and probably beyond, the reef outcrop apparently extends only as far south as 325S.

The area surrounding the indication also shows a high resistivity due probably to the country rocks being strongly silicified and/or containing innumerable quartz veins. This area of maximum silicification extends from about 200W to 700E. Outside of this zone the zones of high resistivity are narrower and isolated between areas of normal resistivity.

(*b*) *Indication B.*—This is a strong indication and is continuous across the layout from 400N/815E to 600S/530E. The indication is approximately coincident with an outcropping quartz-ironstone reef whose strike ranges from 4 to 25 degrees. The bend between 200S and 400S is due to a transverse fault, the southern part of the reef being displaced to the east. The fact that there is an outcropping reef close to the indication renders it unnecessary to make recommendations for testing to locate the source of the indication.

(*c*) *Indication C.*—Indication C is approximately parallel to indication B and traverses the layout from 400N/1200E to 600S/950E. The indications are strongest on this line from 400N to 200N and from 100S to 300S. In the vicinity of traverse 400N the indication is parallel to, but 30 feet east of, a quartz-ironstone vein striking 20° and exposed for a length of 150 feet.

Testing at 200S/1020E by trenching, and sampling of the reef at 400N would be justified.

(*d*) *Indication D.*—Indication D is approximately parallel to indication C but extends only from the vicinity of 0/1550E to 600S/1410E. The indications are strongest on traverses 0 and 200S.

Testing of these two traverses might be justified, but owing to the alluvial flat at those places, it must be pointed out that deep trenching or shallow shaft sinking would be necessary.

(*e*) *Other Indications East of the Base Line.*—A number of indications apart from the above four occur to the east of the base line and are shown on plate 1. They are, for the most part, of lesser intensity and the lines are of shorter length than those already described. They are grouped in the wide central zone of high resistivity indicated by the profiles. Some of them are on the continuations of short quartz-ironstone reefs while others are more or less closely associated with wide and irregular outcropping white quartz reefs.

Any testing would be postponed until after the sampling of the known reefs and the testing of the stronger and more continuous indications.

(*f*) *Indications West of the Base Line.*—The indications in this portion of the layout (with the exception of indication A already described, which is partly to the west of the base line) are weaker and less distinct than those to the east of the base line. The intensity of the indications is greatest on the northern traverses. There is little if any association between the indications and the few outcropping quartz-ironstone and quartz reefs in this portion of the layout.

Any testing carried out should be on traverses 0, 250N and 400N, and at the following points :—0/960W, 250N/890W, 400N/560W and 400N/210W. The same considerations apply as for the indications described in section (*e*) above.

(2) *The Tollis Layout.*—The Tollis reef traverses an extensive alluvial flat but outcrops at intervals on the surface over a length of several thousand feet. A shallow shaft has been sunk on this reef to a depth of approximately 35 feet.

Two traverses, each 1,200 feet in length, were surveyed at right angles to the reef, near the shaft, but no distinct anomalies were found either with the potential ratio, self-potential or magnetic methods. A very weak potential ratio indication was, however, obtained on profile 0. The indistinctness of the indications is probably due to the narrow width of the reef and to the fact that the latter is not at all well-defined.

The traverses show a few weak indications in addition to a more distinct one at 150N/210E and 0/220E. The latter indication arises from a reef parallel to the Tollis reef and which may, perhaps, warrant testing.

The weak indication at 150N/320W and 0/340W arises from an outcropping quartz-ironstone reef in that vicinity which is traceable for considerable distances north and south. The reef is gold-bearing in the southern portion.

The Tollis reef contains a large proportion of iron oxides at the surface but no magnetic anomalies could be observed over the reef by the magnetic method.

IV. TESTING.

No testing in accordance with the above geophysical recommendations, as far as trenching or shallow shaft sinking is concerned, has been carried out to reveal the cause of certain indications. During the geological survey conducted at about the same time as the geophysical survey, a number of outcropping quartz-ironstone reefs were sampled. Information in connexion with the gold content of some of the reefs from which the geophysical indications arise, is therefore available.*

V. CONCLUSIONS.

For the reasons given in the introduction to this report the Mount Todd geophysical survey did not progress beyond the stage of a test reconnaissance survey. The results of the survey were therefore not as numerous or important as they might have been if a more extended survey had been made.

The survey demonstrated that in this area reefs of the quartz-ironstone type can be located by the potential ratio method under all conditions except where large thicknesses of alluvial overburden exist.

The greater part of the survey was carried out on the Jones Bros. layout. A number of poor conductor indications was obtained on this layout. The most pronounced of these indications were obtained in the central portion of the layout in a zone of high resistivity due probably to silicification. The western part of this zone is on the southern extension of the line of Jones Bros. reef. The most pronounced indications in this zone correspond closely with outcropping quartz-ironstone reefs and undoubtedly arise from the latter. A number of shorter and less pronounced indications in this zone do not appear, for the most part, to be associated with outcropping reefs.

To the east of the central zone, the indications are fewer and have changes in intensity along their length. Only one indication was obtained in the area occupied by deep alluvial flats and this indication is near the eastern edge of the flats. The absence of indications further to the east is due partly if not wholly to the probable greater thickness of alluvial overburden in that direction.

A number of indications were obtained to the west of the central zone and are similar to those on the eastern portion of the layout. In this western portion, however, they were obtained from an area in which there is little or no alluvial overburden.

As a result of the geophysical survey of the Jones Bros. layout, a number of sites for testing have been recommended. It is not considered that such testing is urgent at this stage. The testing and development of the known reefs should be conducted first, and if the results indicate payable gold shoots in some of the known reefs, then the testing in accordance with the geophysical recommendations should be proceeded with.

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* *See* Report (Northern Territory No. 5)—The Mount Todd Auriferous Area, by V. M. Cottle.

In addition to the testing sites suggested in Section III. it is probable that some testing may be justified at the southern end of indication A, particularly in view of the fact that the reef associated with the indication appears, as far as outcrop is concerned, to terminate at 325S. The decision as to the testing should, however, not be finalized without a prior geological examination and report of the locality. The reef may be present but covered by soil, detritus, &c., or the indication may arise from a silicified zone and not from a quartz reef.

The two traverses of the Tollis layout represent no more than test traverses and results of economic importance are not to be expected.

The survey, though only a short one, was a definite technical success. Although a preliminary examination of the results has appeared disappointing, it is now considered that the importance of the work from an economic viewpoint would be greatly increased by an extension of the survey. Such extension is under consideration and will probably be carried out in the future as opportunity offers.

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Consultant Geophysicist.

P. B. NYE,
Executive Officer.

SEPP HORVATH,
For the Report of the Electrical Prospecting Company of Sweden.
(Part III.)

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LIST OF PUBLICATIONS.

PERIODICAL REPORTS.

Report for Period Ended 30th June, 1935
Report for Period Ended 31st December, 1935 } In one publication.
Report for Period Ended 30th June, 1936.
Report for Period Ended 31st December, 1936.
Report for Period Ended 30th June, 1937.
Report for Period Ended 31st December, 1937.
Report for Period Ended 30th June, 1938.
*Report for Period Ended 31st December, 1938.

INDIVIDUAL REPORTS.

WESTERN AUSTRALIA.

No. 1, McPhees Patch Area, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 2, The North Pole Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 3, Lalla Rookh Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc. (See also No. 11.)
No. 4, The Nullagine Conglomerates, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 5, The Nullagine River Concessions, No. 695 H, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 6, Talga Talga, Pilbara Gold-field, by M. O'Halloran, B.Sc.
No. 7, The Blue-Spec Gold-Antimony Quartz Veins, Middle Creek-Nullagine District, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 8, Marble Bar Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 9, Bamboo Creek Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 10, Halley's Comet Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc. } (See also No. 28 Supplementary to W.A. No. 3.)
†No. 11, Lalla Rookh Gold Mine, Pilbara Gold-field, by K. J. Finucane, M.Sc. }
†No. 12, Station Peak Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
No. 13, The Just-in-Time Conglomerates, Pilbara Gold-field, by K. J. Finucane, M.Sc.
†No. 14, The North Shaw Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
†No. 15, McLeod's Find, Dalton Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 16, The Tambourah and Western Shaw Mining Centres, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 17, The Sharks Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 18, The Twenty Ounce Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 19, Mining Centres East of Nullagine, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 20, The Warrawoona Area, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 21, The Salgash-Apex Area, Pilbara Gold-field, by K. J. Finucane, M.Sc.
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*No. 23, The Yandicoogina Mining Centre, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 24, The Braeside Lead Field, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 25, Recent Gold Discoveries near Wyman's Well, Pilbara Gold-field, by K. J. Finucane, M.Sc.
*No. 26, The Country between Sharks and North Shaw, Pilbara Gold-field, by F. H. Jones.
*No. 27, The Hall's Creek–Ruby Creek Area, East Kimberley District, by K. J. Finucane, M.Sc.
No. 28, Halley's Comet and Adjacent Mines, Pilbara Gold-field, by K. J. Finucane, M.Sc. (Supplementary to W.A. No. 10.)
*No. 29, The Mount Dockerell Gold Mining Centre, East Kimberley District, by K. J. Finucane, M.Sc. (with Appendix on Christmas Creek Area, by C. J. Sullivan, B.Sc.).
*No. 30, Tin-Columbite Deposits South-East of Mount Dockerell, East Kimberley District, by K. J. Finucane, M.Sc.
*No. 31, The Mount Amherst Gold and Silver-lead Deposits, East Kimberley District, by F. H. Jones.
†No. 32, The King Sound Tin-wolfram Deposit, West Kimberley District, by K. J. Finucane, M.Sc.
*No. 33, The Mount Broome Area, West Kimberley District, by K. J. Finucane, M.Sc.
*No. 34, The Coobina Chromite Deposits, Jimblebah District, by K. J. Finucane, M.Sc.
*No. 35, Geophysical Report on the Kookynie Area, North Coolgardie Gold-field, by E. L. Blazey, B.E.E., J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.
*No. 36, Geophysical Report on the Wiluna Area, Wiluna, by E. L. Blazey, B.B.E., J. M. Rayner, B.Sc., and P.B. Nye, M.Sc., B.M.E.
*No. 37, Geophysical Report on the Big Bell Area, by E. L. Blazey, B.E.E., J. M. Rayner, B.Sc., and P.B. Nye, M.Sc., B.M.E.
*No. 38, Geophysical Report on the Norseman Area, by E. L. Blazey, B.E.E., J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.
*No. 39, Geophysical Report on the Bamboo Creek Area, Pilbara Gold-field, by E. L. Blazey, B.E.E., J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.

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No. 2, The Union Reefs Gold-field, by P. S. Hossfeld, M.Sc.
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*No. 8, Geological Report on the Fountain Head Area, Pine Creek District, by V. M. Cottle }
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*No. 11, Geophysical Report on the Woolwonga Area, Pine Creek District, by J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E. } In one publication.
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*No. 22, The Ciccone Mine, Winnecke Area, Eastern MacDonnell Ranges District, by P. S. Hossfeld, M.Sc.
*No. 23, Second Report on Magnetic Prospecting at Tennant Creek (1936) by J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.
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*No. 25, Geophysical Report on the Southern Extension of the Pine Creek Gold-field, by J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E. } In one publication.
*No. 26, The Evelyn Silver-lead Mine, Pine Creek District: (*a*) Geological Report by P. S. Hossfeld, M.Sc.; (*b*) Geophysical Report by J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.

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*No. 27, The Maude Creek Mining Centre, Pine Creek District, by V. M. Cottle.
*No. 28, The White Range Gold-field, Eastern MacDonnell Ranges District, by P. S. Hossfeld, M.Sc.
*No. 29, The Home of Bullion Mine, Central Australia, by P. S. Hossfeld, M.Sc.
*No. 30, Preliminary Report on The Granites Gold-field, Central Australia, by P. S. Hossfeld, M.Sc.
*No. 31, Second Report on the Mount Todd Auriferous Area, Pine Creek District, by P. S. Hossfeld, M.Sc. (Supplementary to N.T. No. 5.)
*No. 32, The Wallaby Silver-lead Lode, Daly River District, by P. S. Hossfeld, M.Sc. (Supplementary to N.T. No. 19.)
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*No. 36, Geophysical Report on the Maranboy Tin Field, Pine Creek District, by R. F. Thyer, B.Sc., J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.
*No. 37, The Horseshoe Creek Tin Field, Pine Creek District, by A. W. Kleeman, M.Sc.

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No. 2, The Gilded Rose Area, Cloncurry District, by C. S. Honman, B.M.E.
No. 3, The Geophysical Methods of the Electrical Prospecting Company of Sweden, used in the Aerial, Geological and Geophysical Survey of Northern Australia, by Sepp Horvath.
No. 4, Geophysical Report on the Soldiers Cap Area, Cloncurry District, by J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.
No. 5, Geophysical Report on the Trekelano Area, Cloncurry District, by J. M. Rayner, B.Sc., and P. B. Nye, M.Sc., B.M.E.
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*No. 19, The Bower Bird Area, Cloncurry District, by C. S. Honman, B.M.E.
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In the above list—

* denotes reports prepared and in course of being edited ;

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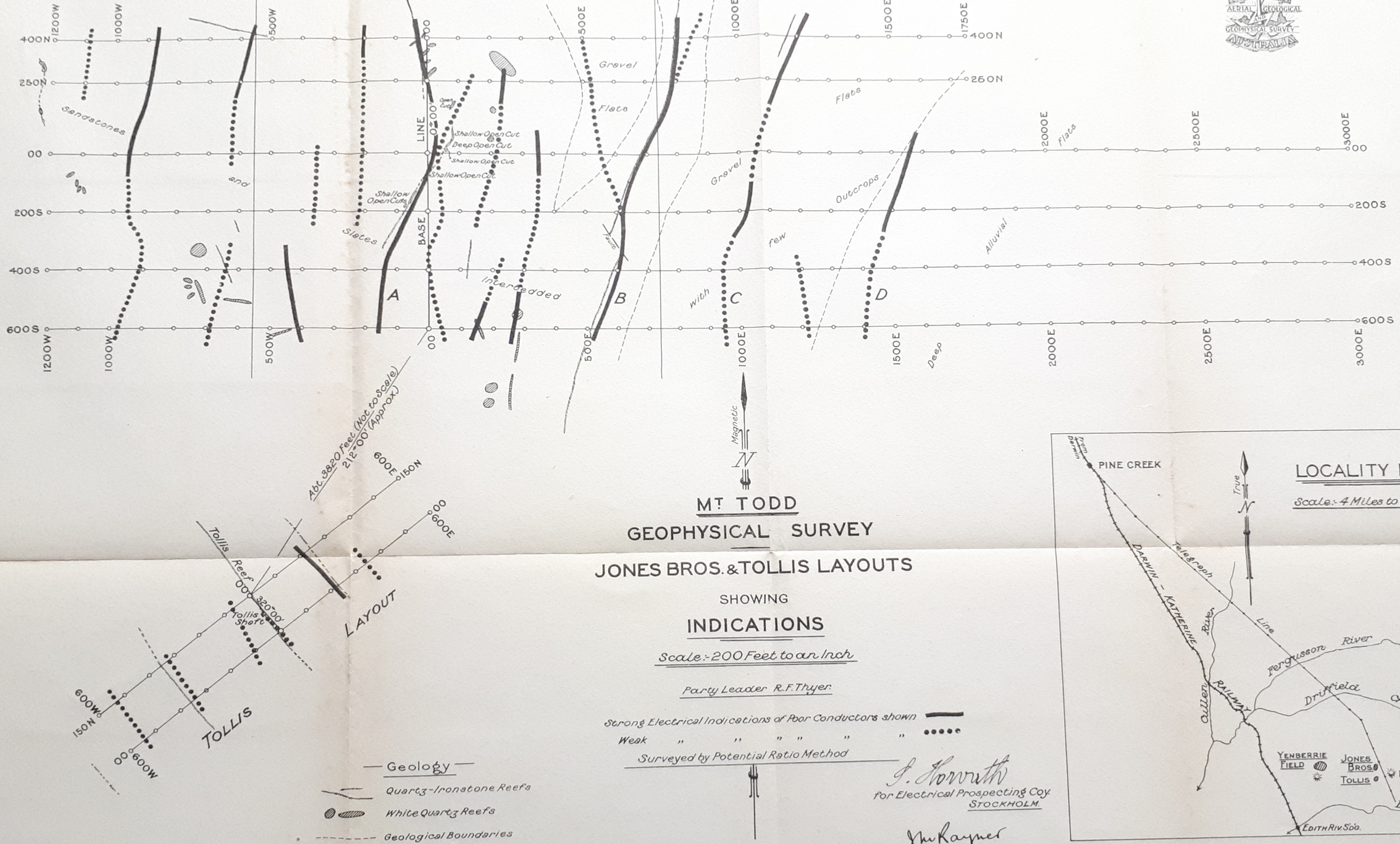
Mt TODD (N.T.) · PLATE I

(GEOPHYSICAL)

Reef extends towards Jones Bros. No3 Shaft situated about 850 feet from 400N/00 but is not necessarily a direct continuation of Jones Bros. Reef.

JONES BROS. LAYOUT



— Geology —

Quartz-Ironstone Reefs

White Quartz Reefs

Geological Boundaries

From Plans of N.T. Geological Party.

Mt TODD
GEOPHYSICAL SURVEY
JONES BROS. & TOLLIS LAYOUTS
SHOWING
INDICATIONS

Scale:- 200 Feet to an Inch

Party Leader R.F. Thyer.

Strong Electrical Indications of Poor Conductors shown ▬▬

Weak " " " " " " •••••

Surveyed by Potential Ratio Method

J. Horwath
for Electrical Prospecting Coy.
STOCKHOLM.

J. W. Rayner
Consultant Geophysicist.
22 . 3 . 37

MT TODD · PLATE 2

(GEOPHYSICAL)

MT TODD · (N.T.)

— JONES BROS. —

LOGARITHM OF POTENTIAL GRADIENTS

Horizontal Scale: 200 Feet to an Inch.

Party Leader R.F. Thyer

Surveys made with S. Horvath Esq. as Field Supervisor for The Electrical Prospecting Co. of Sweden.

Jm Rayner
Consultant Geophysicist.
22 . 3 . 37

MT. TODD · PLATE 3

(GEOPHYSICAL)

MT. TODD · (N.T.)

TOLLIS AREA

Horizontal Scale; 200 Feet to an Inch

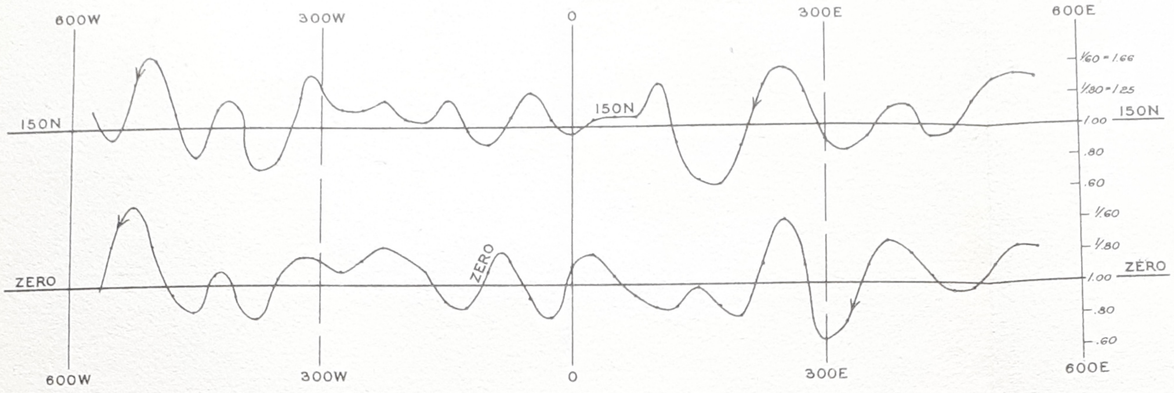
Surveys made with S. Horvath Esq., as Field Supervisor for The Electrical Prospecting Coy. of Sweden

Party Leader: R. F. Thyer

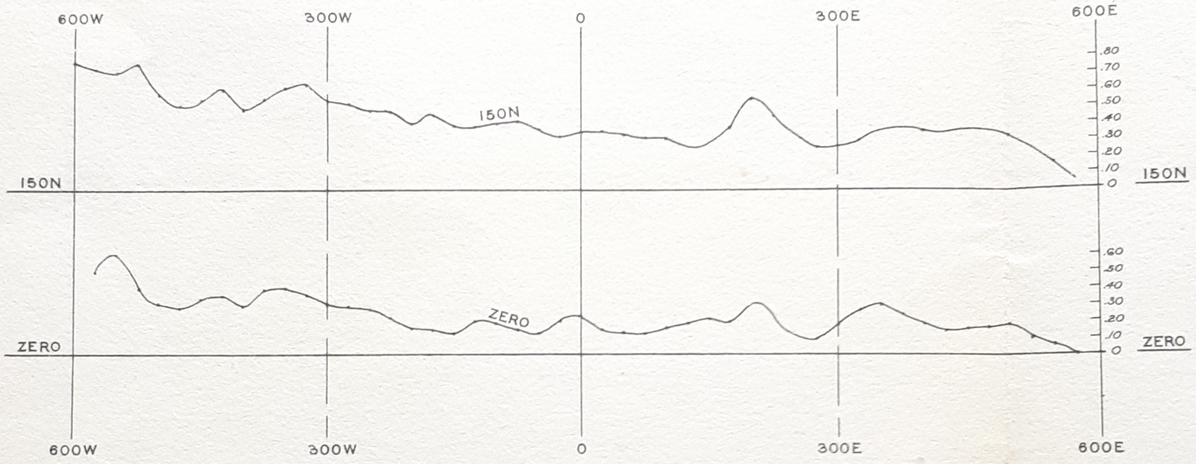
John Rayner
Consultant Geophysicist
22 . 3 . 37

POTENTIAL RATIOS

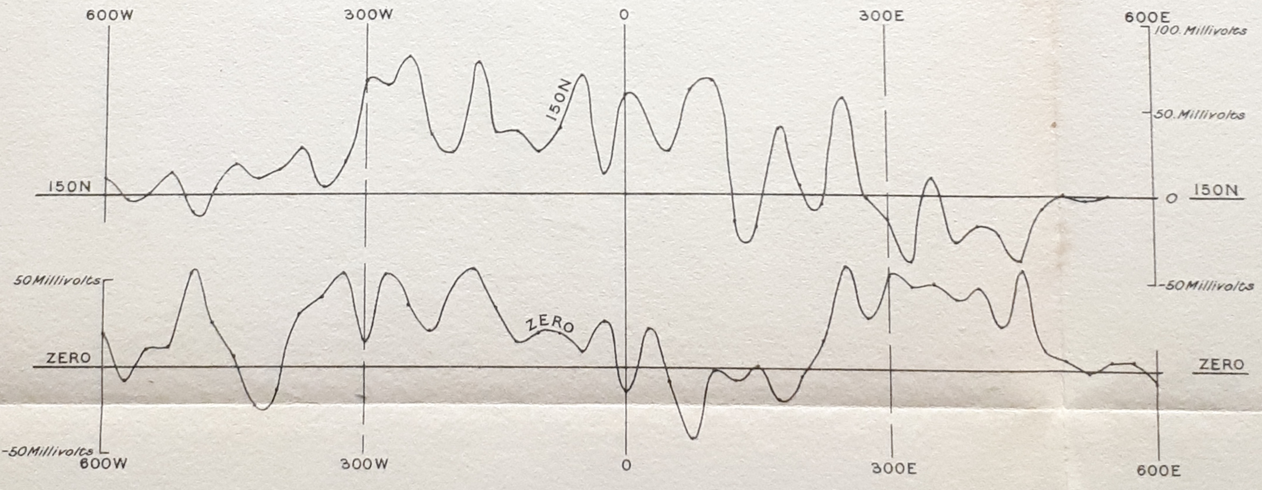
Direction of Survey Indicated by Arrows



LOGARITHM OF POTENTIAL GRADIENTS



SELF POTENTIAL RESULTS



MAGNETIC VERTICAL INTENSITIES