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PRELIMINARY GEOCHEMICAL PROSPECTING REPORT ON NAMOONA LEAD PROSPECT, N.T.

By

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PRELIMINARY GEOCHEMICAL PROSPECTING REPORT

ON WANGOMA LEAD PROSPECT, N.T.

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The purpose of the survey was to establish the probable extent of a lead deposit which had been discovered only a few weeks previously by prospectors of the Australian Mining & Smelting Company.

The prospect is approximately 21 miles by road from Goodparla, in a west north-westerly direction, near the headwaters of the Goodparla Creek. Topography is undulating with one prominent ridge, on which the mineralization occurs, extending approximately in a SE-NW direction. Vegetation consists mainly of Eucalyptus species growing to heights of 30'-35'. A lead indicator plant (according to H. Brennan in charge of the prospecting team) is found in the area.

The mineralization appears to occur in Masson Beds, the lowest sub-division of the Brocks Creek Group, of Lower Proterozoic age. These beds are mainly of siltstones and quartz greywackes. The siltstones exhibit considerable minor folding at the surface and are the beds which have been replaced by the lead minerals - galena and cerussite.

When the geochemical prospecting party arrived at the prospect a bulldozer had already opened up three costeans. Massive galena, in lumps weighing up to several hundredweights, had been removed from just below the surface.

Strong lead tests were expected in the vicinity of this known mineralization and sampling and testing on a grid over the area proved this to be correct. Sampling and testing procedures were similar to those used at Mt. Isa (Debnam, A.H. 1954, Bull.Inst.Min.Metall.63(6),269), with some minor modifications.

Assuming the background to be a "negative" test - only 4 "negatives" were obtained during the survey but more extensive sampling, further removed from the prospect, would give a definite "negative" background - the various results were designated as follows:

Designation		Colour of Dithizonate	x Background
++++	Very High	Pink with 2 drops test solution	1,000
+++	High	" " 1 c.c. " "	100
++	Medium	" " 5 c.c. " "	20
+	Low	" " 30 c.c. " "	4
0	"Negative"	Colourless 30 c.c. " "	Background

The choice of 4X background for the Low result is arbitrary but further work on the samples will indicate the correct multiple.

Tests on samples from No. 1 costean, where samples were taken from three positions with separate samples at each position from surface and near bedrock, indicated that acid soluble Pb was present and in consistant amounts throughout the entire soil profile in quantities of 1000X-3000X background i.e. in the order of 0.1% Pb.

The grid covered an area of 1200' x 1000', traverses being 200' apart and sampling points at 100' intervals within the traverses. Strong positive results extended over

most of this area (see plan) and indicate that mineralization can be expected to extend both to the north-west and to the south-east. The high results on the south-west side of the ridge (samples 2.9 - 2.11 and 5.9 - 5.11) indicate the possibility of a continuation of the mineralization in this vicinity worthy of some investigation.

Results from the long traverse in a north-westerly direction from the main prospect show that the outcrops uphill from sampling points 13.0 - 18.0 carry lead mineralization. Samples from points 19.0 - 30.0 are taken from alluvial soils (?) and may not be representative of samples from lower horizons. The low and "negative" results may not be correct for this section, deeper sampling being required. However it is possible that the sub-outcrops uphill from this section are barren with respect to lead minerals. The high result for 38.0 with the mediums for samples 31.0 - 37.0 show that another zone of Pb mineralization exists. Lead minerals were found at the surface on either side of the traverse in this vicinity. The surface here is quite flat and high-grade mineralization would not produce large anomalies.

The two proposed traverses passing uphill from points 13.0 and 26.0 would have supplied valuable information had rain not interrupted the sampling.

The geochemical prospecting results, although not as complete as would be desired, may serve as a guide in the positioning of sites for waggon-drilling. The following are the sites recommended:

1. Between Nos. 1 and 3 costeans as shown on plan.

2. Between sampling points 4.0, 4.4, 6.0 and 6.4.

3. Near sampling point 3.0.

4. In vicinity of sampling point 5.4 as shown on plan.

5. On the south-west slope of the ridge, between sampling points 2.9, 2.10, 5.9 and 5.10.

6. Downhill from the outcrops above sampling points 13.0 to 18.0.

7. In the area showing promising mineralization at the north-west end of the traverse (near point 38.0).

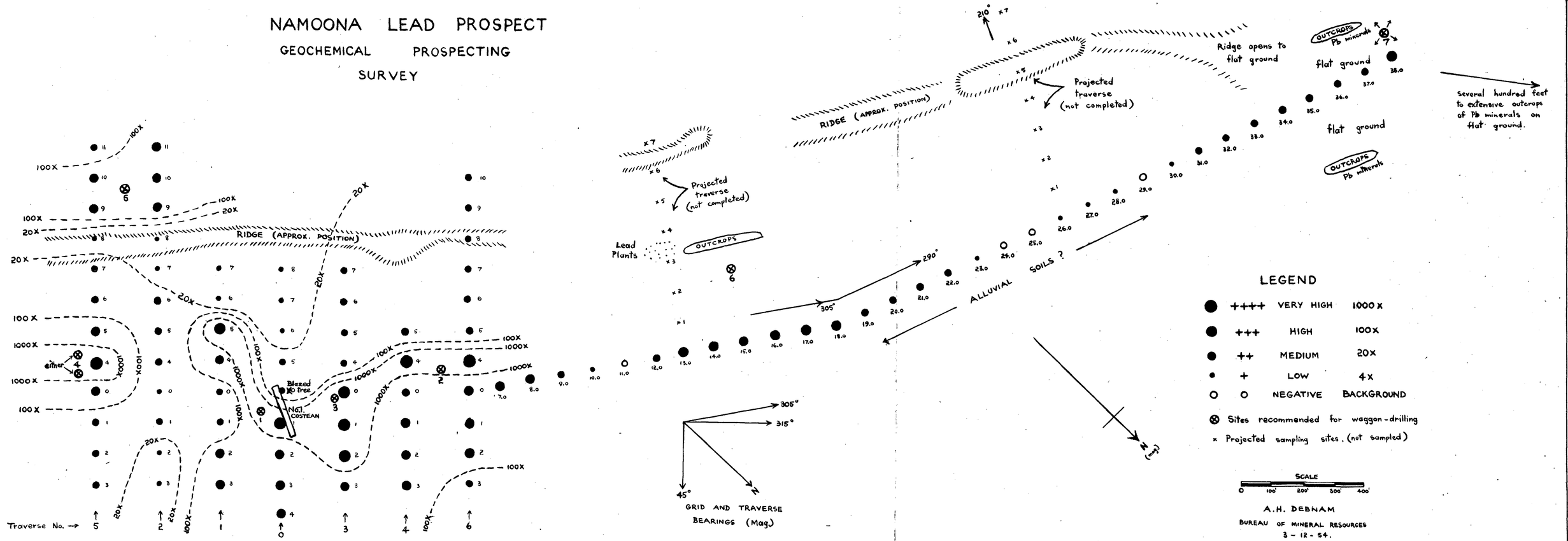
These recommendations are derived purely from the geochemical results and should be varied in the light of more recent information gained from the costeans.

Conclusions.

The geochemical prospecting has given definite indications of lead mineralization for a linear extent of at least 4,400 feet, with the possibility of a barren section at one place, although further testing is justified here. The extent is probably much greater this because high results were obtained at each end of the line investigated. Geochemical prospecting would define the extensive mineralized area noted on the plan as occurring several hundred feet to the north-north-west of sampling point 38.0. This type of prospecting should prove particularly useful for tracing the mineralization below the deep soil cover which occurs in the north-western part of the area, provided that deeper sampling is used.

NAMOONA LEAD PROSPECT

GEOCHEMICAL PROSPECTING SURVEY



LEGEND

●	++++	VERY HIGH	1000 X
●	+++	HIGH	100X
●	++	MEDIUM	20X
•	+	LOW	4X
O	O	NEGATIVE	BACKGROUND

⊗ Sites recommended for waggon-drilling

× Projected sampling sites. (not sampled)

SCALE

0 100' 200' 300' 400'

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