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PRELIMINARY

Prospecting Authority 2911, situated in the southern part of the Northern Territory and covering some 393 square miles was ~~on~~ ground checked during the period mid June through mid July 1971. Earlier reconnaissance work by Dillingham Mining involved an airborne magnetic and radiometric survey which covered some 400 line-miles of traverse. Primary objectives of the study were to evaluate the base metal potential of the main Precambrian granitic exposures in the Mount Cavenagh area and similarly in smaller, scattered exposures of granite north and west of Victory Downs and to check radiometric anomalies detected during an earlier airborne survey.

EXPLORATION ACTIVITIES

Field Work: Ground investigations combined reconnaissance outcrops mapping and geochemical rockchip sampling in all areas known and/or suspected of supporting Precambrian granitic rock.

Geologic Mapping: Results of geologic mapping are shown on the Geologic Map (1,100,000 scale) accompanying this Report. Two granitic facies were recognised; the most predominant and wide spread was a coarse-grained, equi-granular, normal biotite granite exhibiting a faintly defined gneissic foliation and the second a finer medium, equigranular biotite-amphibole variety lacking foliation but being distinctly more tenacious and slightly silicified. The latter granite, occurring in the Mt. Burrow area, was noted cut by numerous pegmatite veins and occasional quartz stringers. Other rocks of the area, although not investigated as thoroughly as the granites, include scattered diabase dikes, typically westerly trending bodies from 5 to 15 feet in width and at least several hundred feet in length that intrude the coarser granite but with a tendency to parallel its foliation.

Isolated, residual cappings of De Souza Sandstone (Triassic) was observed throughout the area but not mapped.

Geochemistry: Results of geochemical sampling are summarised in Table 1. Sample locations are shown on the accompanying Geochemical Sample Location Map.

Table 1. - Summary of geochemical rockchip sampling, P.A. 2911, Kulgera Quadrangle N.T. All values in P.P.M.

	CU	Pb	Zn	Co	Ni	Mo	As
High	110	56	170	34	120	13.00	BLT
Low	2	12	14	4	4	0.50	"
Mean	11.7	16.2	64.8	11.9	9.2	1.01	"

In general, the granitic rocks of this area exhibit a distinctively lower background range for copper, lead and arsenic than is normally expected for felsic intrusives. The feature is believed indicative of an overall chalcophile deficiency of the granites.

LOGISTIC SUPPORT

Personnel comprising the exploration team included a qualified graduate geologist and an experienced prospecting assistant. In addition, back-up assistance involving senior and technical staff members was afforded on a periodic basis.

Transport involved a four-wheel drive vehicle with camp trailer. Trail-type motorcycles were used for reconnaissance traverses. Aircraft support was not required during the examination but approximately 10 hours of survey and reconnaissance observation flying were conducted during the initial stages of the programme.

SUMMARY

Prospecting Authority 2911, covering 393 square miles in the southern part of the Northern Territory, was examined during two separate programmes; the first involving an airborne magnetic and radiometric survey which traversed some 400 line-miles, and the second involving a ground reconnaissance with emphasis on regional geochemistry and geologic mapping of the Precambrian granites.

Results of the work distinguished two granite types, a widespread coarse equigranular normal granite and a finer-grained more siliceous type. The latter intrusive was noted to support a greater abundance of pegmalite veins and dikes.

Results of geochemical sampling, geologic mapping and airborne geophysics failed to produce any important anomalies.

CONCLUSIONS

No further work is planned for the area. It is intended that our interest in the Prospecting Authority be terminated.

