MC S 38

1988 ANNUAL REPORT
GHEKO PROSPECT
NORTHERN TERRITORY

CENTRAL PACIFIC MINERALS N.L.
REPORT NO. N.T. 268

JUNE 1989 R.G. McIver
Chairman: Sir Ian McFarlane

Our ref: JPN-1

Your ref:

Please reply to: Brisbane

22nd June 1989.

The Director General,
Department of Mines & Energy,
Mineral House,
The Esplanade,
Darwin, N.T. 5790.

Dear Sir,

Re: ANNUAL REPORT OF MC S 38

Please find enclosed the Annual Report for 1988 for the above.

We trust this satisfies the requirements of the current Mining Act.

Yours faithfully
CENTRAL PACIFIC MINERALS N.L.

[Signature]

R.G. McIver,
GENERAL MANAGER - EXPLORATION

Encl.

[Additional note]

No exploration work was carried out in 1988. The report contains an engineering account, partly obtained from BHP, which...
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FIGURE 1. Locality Plan /

PLATE 1. MC S 38 Gheko Prospect - General Geology □
1. **INTRODUCTION**

The Gheko Prospect is located approximately 50 km north-east of Alice Springs, in the Northern Territory. The prospect contains a copper, lead and zinc gossan about 1.6 km south of the summit of Bald Hill. The prospect was found using close-spaced stream sediment geochemical sampling in the area of former Authority to Prospect 1721, in 1969. In 1970 it was mapped in detail and an I.P. survey was carried out over the most promising outcrops. In 1971, a drilling programme of four inclined percussion drill holes (total 259.5m) was completed.

2. **TENURE**

MC 38 (formerly MC 463H) of 33 hectares was granted to Central Pacific Minerals N.L. on 22nd March 1984.

3. **GEOLOGICAL SETTING**

The Gheko Prospect mineralization consists of a series of quartz-hematite and quartz-magnetite rocks, of anomalous base metal content set in a small area of complicated, medium-grade metamorphics of the Archaean Arunta Complex, slightly south of the hinge area of the Winnecke Nappe. The These iron-rich rocks form part of a discontinuous horizon which can be traced for over 25 kilometres from Rankin’s Copper Prospect to Winnecke Depot.
MC's 38
GHEKO PROSPECT

CENTRAL PACIFIC MINERALS N.L.,
MC's 38
GHEKO PROSPECT
LOCALITY PLAN

DATE
June 1988

SCALE
1:250,000

DRAWN BY
R.A.G.

PLAN No.

Figure 1
4. **GENERAL GEOLOGY OF THE GHEKO PROSPECT**

The main rock types are quartzo-feldspathic gneisses and amphibolites. The most obvious structural features are two fault-like, retrograde schist-zones striking north-east. A major schist zone strikes east-west across the northern boundary of the area mapped. Quartz-hematite rocks and copper, lead and zinc mineralization are located mainly at the boundaries of the amphibolite and quartzo-feldspathic horizons. The mineralized rocks form lenses up to 100 metres long and 5 metres wide.

5. **STRUCTURE**

Small scale structures may be classified as high grade or retrograde as follows:

**High Grade:**

(a) **Schistosity, foliation folds:** Schistosity and foliation are parallel in all gneiss outcrops except in the hinges of small folds, where schistosity forms an axial plane structure to folds defined by foliation. Such folds are usually asymmetrical, similar and isoclinal in style. Schistosity is absent from the amphibolites, but folds of identical style are common.
(b) **Lineation:** A lineation in both the gneisses and amphibolites is defined by mineral streaking, and lies parallel to fold axes defined in foliation.

**Retrograde:**

(a) **Schistosity, foliation:** Well-developed, fine foliation defined by 1-2mm thick layers, occurs parallel to a retrograde schistosity in the chlorite and mica schists of the retrograde schist-zones. No retrograde folds were observed.

((b) **Lineation:** A rare, down-dip lineation lies in the retrograde schistosity.

6. **MINERALIZATION**

The mineralization at the Cheko Prospect consists of gossanous ironstones in quartz-hematite and quartz-magnetite "reefs". Most of the reefs and gossans are small and lenticular, concordant with schistosity and occur at or near the amphibolite/quartzo-feldspathic gneiss contact. Other quartz-hematite rocks, usually without a gossanous structure, occur enclosed within the amphibolite or quartzo-feldspathic gneiss.
Several zones of sulphide mineralization were encountered in the percussion drill holes. The sulphides are mainly pyrite with traces of chalcopyrite, which occur in the quartz-hematite rock at the edges of the amphibolites and within the amphibolites themselves.

Results from samples taken from drillholes (over 1.5m) reached 7.8% zinc and 8.5 g/t silver (PH2, 42-43.5m).

The occurrence of the quartz hematite rocks at or near the contact of amphibolites and quartzo-feldspathic gneiss can be observed in many places to the east and west of the Cheko prospect and seems to be characteristic of the mineralization type. The origin of the ironstones is uncertain, but the occurrence of a form of folded lithological layering within them and the fact they are restricted to a fairly constant horizon suggests that they have undergone deformation and metamorphism with the country rocks. Assuming strain is large, their shape will almost certainly reflect the geometry of the country rocks. Hence the bodies of quartz-hematite or quartz-magnetite and gossan should be lenticular in shape in three dimensions, with the longest dimension parallel to lineation and the shortest dimension normal to schistosity. Their longest dimension is parallel to the direction 85 degrees to 307 degrees i.e., steeply to the west. It seems unlikely that their maximum elongation could be to the east, unless complicated by later deformation.
7. 1988 PROGRAMME

The potential of the prospect was again reviewed in 1988. However, because of the small size of the resource and the lack of significant price-rise incentive, it was concluded that the property should continue, for the time being, on a care-and-maintenance basis.

8. REFERENCES


McPhar Geophysics, 1970  Report on the Induced Polarization and Resistivity Survey on Several Areas in A to P 1721, Northern Territory, Australia, for Central Pacific Minerals N.L.

