ANNUAL REPORT

MCC's 338, 339 and 341

BLACK CAT REGION

TENNANT CREEK N.T.

ADELAIDE PETROLEUM NL

FEBRUARY 1989

BACKGROUND

The claims comprise the eastern portion of a large holding of tenements which are held jointly by either Naughton and Clarke or Adelaide Petroleum NL. The area of MCC's 338, 339 and 341 was included in an airborne radiometric and magnetic survey flown in late 1987. Reconnaissance outcrop inspection, mapping and sampling was carried out over the region in early 1988. The main emphasis of work was to locate similar quartz hematite bodies as that which occurs at the Black Cat mine on an adjoining tenement. An option was current at that time over the Black Cat Mine in favour of the Adelaide Petroleum Sabminco Joint Venture.

PREVIOUS WORK

Gold was mined on a small scale from the Black Cat Mine prior to 1936 and then more consistently in the period 1937-42 for a total recorded production of 1023 ounces. Grades varied from 8 to 18 grams per tonne.

Previous exploration is reported by Forrest in 1987 to have consisted of ground magnetic surveys and geological mapping. Further mapping, an electromagnetic survey and drilling of 16 wagon drill holes were completed by Australian Development NL in 1959. Results of this drilling were not considered encouraging, however, intercepts in six of the holes ranged from 3.65 metres of 2.5 g/t Au to 1.23 metres of 5.4 g/t Au (refer Figure 2).

In 1987 National Gold NL completed a limited sampling program of the main workings and dumps of the Black Cat reported by Forrest. Results of this work indicated potential for gold lodes to continue below existing workings in a shear zone.

GEOLOGY/MINERALISATION

The claim areas, lie within the Mammoth - New Moon area as described by Crohn and Oldershaw (1965) where the Lower Proterozoic Warramunga Group consists of interbedded shale and greywacke. The hematitic shale horizon of this Group crops out as finely laminated banded hematitic shale at the Black Cat Mine, and extends discontinuously east-west across the area from Mammoth to New Moon. At Black Cat and all the other mines in this zone, gold is associated with ironstones consisting of hematite ± quartz ± jasper ± magnetite; the ironstones being emplaced close to hematitic shale, and localized near steeply dipping shears. Lenses of prominent blood red jasper occur in association with the ironstone at Black Cat.

Workings at the Black Cat consist of three shafts and an adit leading to a stoped out area beneath the silicified ironstone capping. Ore occurs in highly weathered and friable fine grained clay rich sediments that have been brecciated. The workings occur to depths of 10 to 15 metres below the ironstone at surface and it is presumed that enrichment of gold bearing lithologies has occurred during the weathering process.

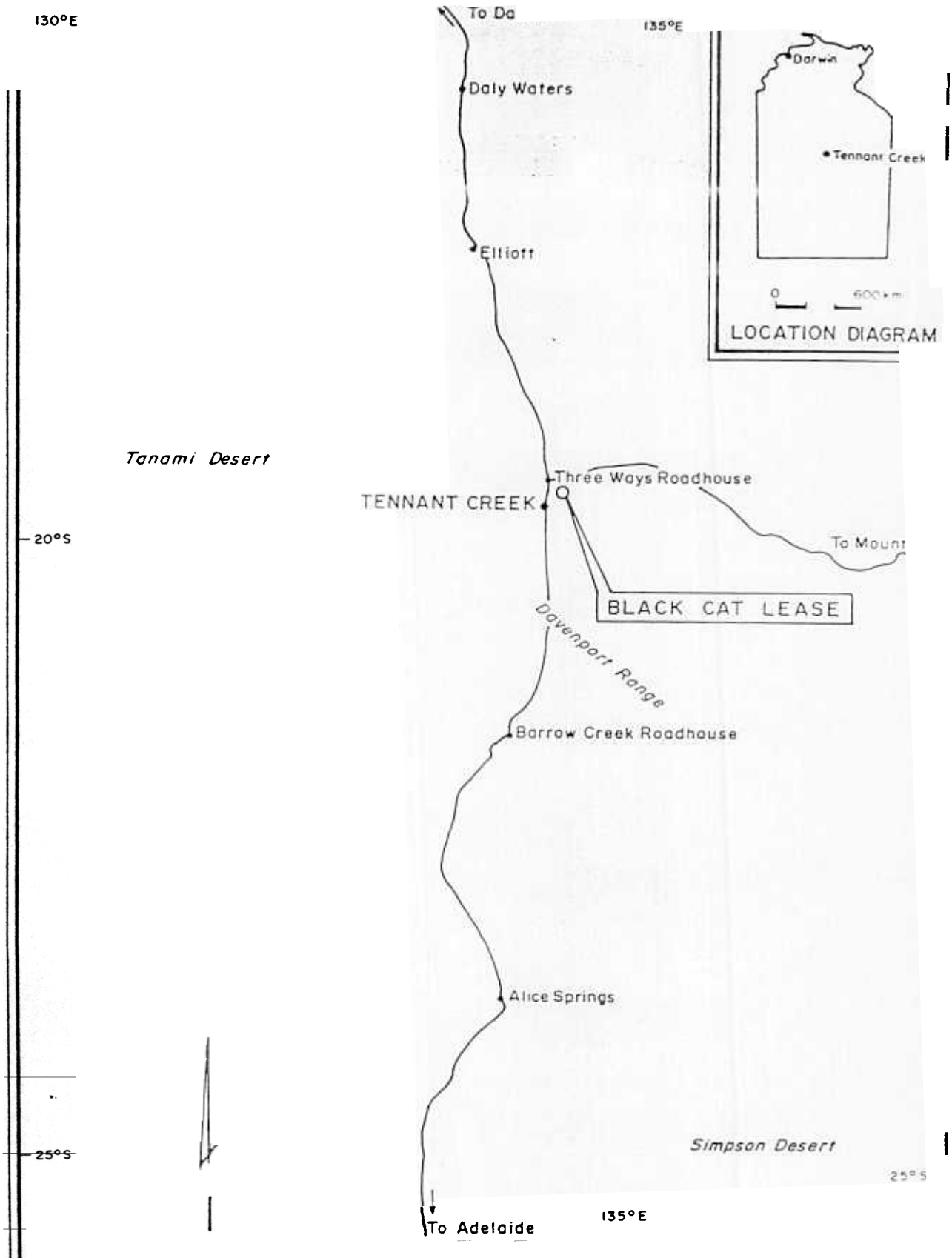
The areas comprising MCC's 338, 339 and 341 were found to contain thick sections of Warramunga Group metasediments comprising interbedded weakly hematitic shale and greywacke with minor quartz blows concentrated in fractures.

Sampling of several iron rich zones did not result in any gold being defined.

CONCLUSIONS

No prominent magnetic features were defined by airborne surveys over MCC's 338, 339 and 341. Ground reconnaissance of these areas did not define any zones of interest which could contain a significant quartz ironstone body capable of hosting gold mineralization.

It was concluded that no further work should be undertaken on these three claims at present.



BLACK CAT LEASE
TENNANT CREEK
NORTHERN TERRITORY
LOCATION MAP