FINAL REPORT
ON IMAGED
EXPLORATION LICENCE 2504
OPEN FILE

BY

B. L. KIRKPATRICK

DISTRIBUTION:
N.T. DEPARTMENT OF MINES & ENERGY
DESIGN & CONSTRUCTION PTY LIMITED
BP AUSTRALIA LIMITED
GEOPEKO: GORDON DARWIN

DARWIN
INTRODUCTION
LOCATION
SUMMARY
CONCLUSIONS
RECOMMENDATIONS
EXPENDITURE

FIGURES

1. Area Locality Plan
2. Tenement Locality Plan
3. Diagramatic Work Chart

REFERENCE

Kirkpatrick, B. L. - Report on drilling for Cainozoic gravels in the Bonaparte Gulf Basin, N.T.

CR 82/122

Geopeko, Report D81/9
INTRODUCTION

Exploration Licence 2504 covering 32.58 square miles was granted on 3rd December, 1980 and this is the Final Report following expiry of the licence on 2nd December, 1981.

This E.L. was part of a regional exploration programme, mainly for diamonds, comprising E.L.'s 2411, 2412, 2417, 2418, 2419, 2420, 2421, 2504, 2513, 2514, 2515, 2584 and 2585 which were the subject of a joint venture between Design and Construction Pty Limited, BP Australia Limited and Peko-Wallsend Operations Ltd, where Peko-Wallsend, through Geopeko, were the operators. The joint venture commenced on 1st May, 1981 and terminated on 11th March, 1982.

Because of recent successful exploration for kimberlites in Western Australia, the recognition of a potential kimberlite province in the Kimberleys, and possible influence of the Hall's Creek Fault on emplacement of the Argyle diamondiferous kimberlite, then the Fitzmaurice Mobile Zone and Sturt Shelf in the vicinity of the Victoria River Fault must also be considered prospective for diamonds.

Some of the E.L.'s held potential for the discovery of alluvial diamonds in a possible palaeo-Ord River channel, or associated with coastal beaches near the mouth of this possible channel.

LOCATION

Legune Station, Pastoral Lease 679 on the Port Keats/Auvergne 1:250,000 sheets (SD52-11, SD52-15).
SUMMARY

Gravels and other sediments indicative of a deltaic environment were found in one of the scout lines drilled in the area.

Details of the results of the full programme of reconnaissance drilling are presented in: "Report on Drilling for Cainozoic Gravels in the Bonaparte Gulf Basin, N.T." by B.L. Kirkpatrick (Geopeko Report No. D81/9) LR82/122

At the date of writing, the gravel samples collected in the above programme have not been subjected to heavy mineral separation and identification.
CONCLUSIONS

It was decided that the depth to basal gravel (generally greater than 25 metres) was too great for a viable alluvial diamond operation.

The chance of finding sufficiently high grade diamondiferous alluvium was considered too low to justify an expensive, large diameter, drilling programme.
RECOMMENDATIONS

Due to the lack of encouragement given by the reconnaissance drilling programme, it was decided to relinquish Exploration Licence 2504.
EXPENDITURE

As this E.L. was part of a regional programme, expenditure was allocated according to its areal percentage.

Total allocated expenditure for the term of the E.L. was $8,191.
FIGURE 3

DIAGRAMATIC WORK CHART

LINE OF SCOUT DRILLING