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A.C.N. 061 681 098

PALADIN RESOURCES NL

FINAL REPORT
on
Exploration Licence 9057

MARY RIVER

NORTHERN TERRITORY

COVERING THE PERIOD

12 May 1995 to 30 January 1997

COMPILED BY: K S TAYLOR

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SUMMARY

EL 9057 was granted to Paladin Resources NL on 12 May 1995 and cancelled as of 30 January 1997.

Work carried out during the first year of tenure included outcrop sampling with 32 rock chip samples and a stream sediment survey of 147 samples with a follow up of a further 43 samples.

No further field work was carried out during the second year.

Exploration was focussed on gold.

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1. INTRODUCTION

Exploration Licence 9057, covering an area of 19 blocks (57km²) was granted on 12 May 1995 to Paladin Resources NL (Paladin). It was cancelled as of 30 January 1997.

The tenement was one of several worked by Paladin as the Central Pine Creek Project.

This report covers exploration work carried out by Paladin during the period of tenure.

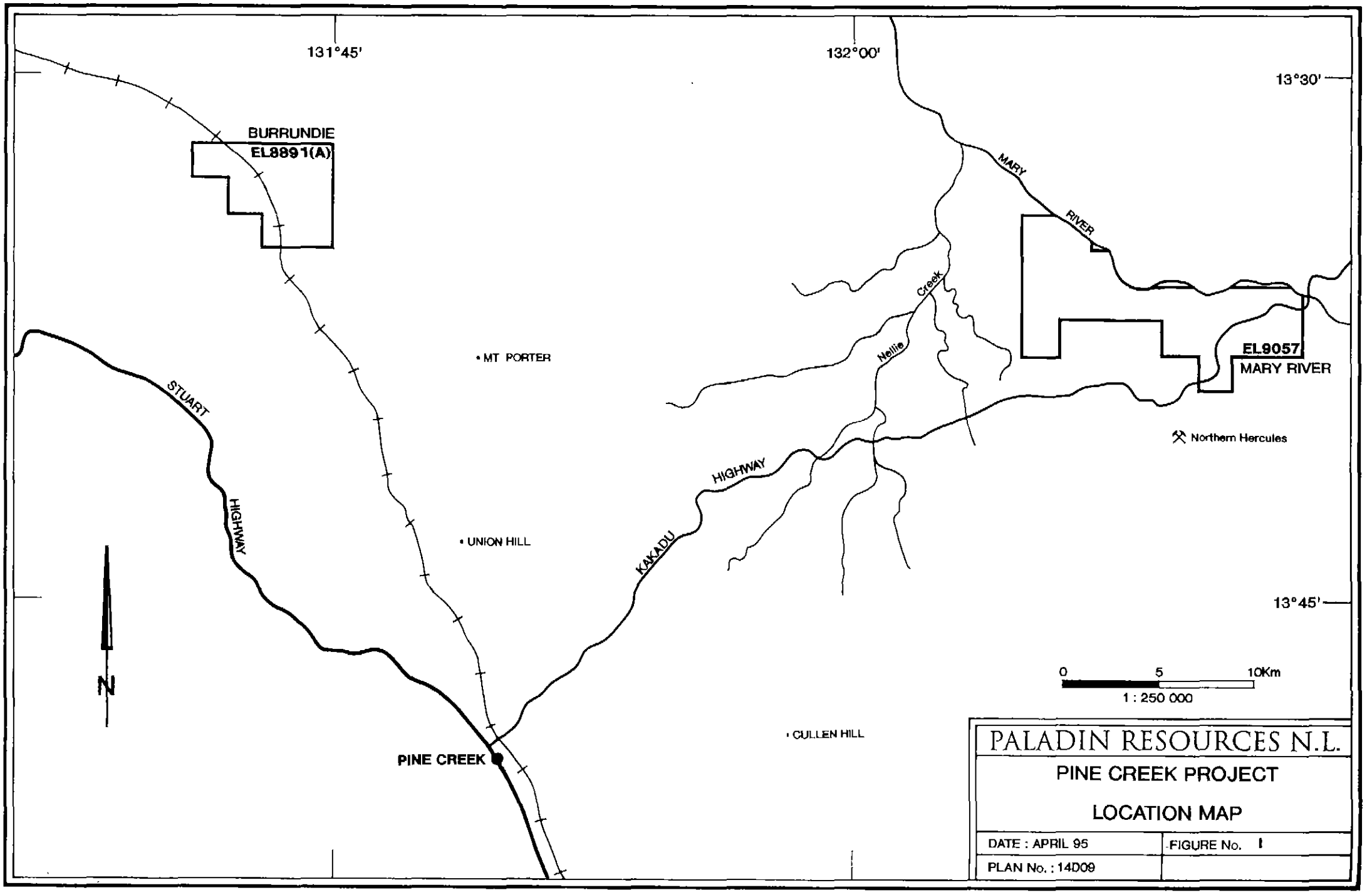
2. LOCATION

EL 9057 was located about 55km east of Pine Creek on the Kakadu Highway on the MT EVELYN 1:250,000 map sheet SD 53-5 and the MOLINE 1:50,000 map sheet 15/4-IV *(Figure 1)*.

3. GEOLOGY

The Central Pine Creek Project lies within the Central Marrakai Structural Domain of the Pine Creek Geosyncline with the Mary River tenement located to the north of the abandoned Moline Gold Mine. In this region the prospective South Alligator Group rocks have been uplifted by intruding granitoid plutons such as the Cullen Granite and subsequently exposed on the flanks and marginal to the cores of regional domes. Gold mineralisation occurs preferentially within carbonaceous and sulphidic units of the South Alligator Group in quartz reefs or stockworks in a variety of structural settings though usually in association with anticlinal axes. Most gold deposits lie between 500 metres and 1000 metres from the granite contact.

Stratigraphically the South Alligator Group consists of the basal Koolpin Formation made up of BIF, carbonaceous phyllite and siltstone overlain by tuff, siltstone and phyllite of the Gerowie Tuff, and is topped by phyllite, chert and BIF of the Mt Bonnie Formation. Burrell Creek Formation flysch sediments of the Finnis River Group conformably overly the South Alligator Group. The sediments were intruded by the Zamu Dolerite before the onset of metamorphism and deformation. The


131°45'
132°00'
13°30'
13°45'
BURRUNDIE
EL8891(A)
MARY
RIVER
Creek
Nellie
EL9057
MARY RIVER
MT PORTER
STUART
HIGHWAY
UNION HILL
KAKADU
HIGHWAY
Northern Hercules
CULLEN HILL
PINE CREEK
N
0
5
10Km
1 : 250 000
PALADIN RESOURCES N.L.
PINE CREEK PROJECT
LOCATION MAP
DATE : APRIL 95
FIGURE No. 1
PLAN No. : 14D09

rocks are metamorphosed to lower greenschist facies by the Pine Creek orogeny. The tight isoclinal folds trend north and north-west and are refolded by north-east trending open folds.

EL 9057 covers the northern edge of the Cullen Granite and large areas of Early Proterozoic metasediments east and south of the granite.

The gold deposit models targeted in the Mary River area the same as those in the rest of the Central Pine Creek Project. The structure responsible for the mineralisation is sub-parallel (usually crossing with an acute angle) to axial planes of anticlines resulting from the phase of deformation which occurred before the Cullen Batholith intrusion.

4. INVESTIGATIONS

4.1 First Year

Work carried out during the first year of tenure included outcrop sampling with 32 rock chip samples and a stream sediment survey of 147 samples with a follow up of a further 43 samples. Full details are to be found in the 1995/1996 Annual Report.

4.2 Year Two

After reviewing the results of the stream surveys, it was decided to concentrate activities on other targets in the Pine Creek Geosyncline and consequently the exploration commitment was not met in Year One and the tenement was cancelled as of 30 January 1997. No further field work was carried out in the second year.