

1. SUMMARY

1.1 Drilling

Finke No. 1, located approximately 110 kilometres southwest of Alice Springs in the Amadeus Basin, Northern Territory (Figure 1), was spudded on April 26, 1983 using Rockdril Rig 19. The well was drilled in Oil Permit 175 of the Northern Territory. Partners in the well included:-

Pancontinental Petroleum Limited (Operator)
Magellan Petroleum (N.T.) Pty. Limited (Permit Holder)
United Canso Oil & Gas Limited
International Oil Proprietary
Amadeus Oil N.L.
Apollo International Minerals N.L.
Farmout Drillers N.L.
C.D. Resources Pty. Ltd.
International Energy Development Corporation of Australia P/L
Oilmin N.L.
Transoil N.L.
Petromin N.L.
Canada Southern Petroleum Ltd.

An 8" hole was hammered to 40.4 metres after which the 12-1/4" hole opener was run to 39.4 metres. Casing was run and the shoe landed at 36.66 metres. The 8" hole was hammered with air to 224 metres when progress with the hammer halted. The hammer was tripped and replaced with a 7-7/8" roller bit. The 7-7/8" hole was completed to 252 metres with no drilling problems and 7" casing run.

The 5.75" core bit was reamed through the shoe to bottom at 253 metres where a show of live oil was encountered. Coring continued to 258.2 metres where upon a decision was made to test the encouraging oil shows intersected in the core hole.

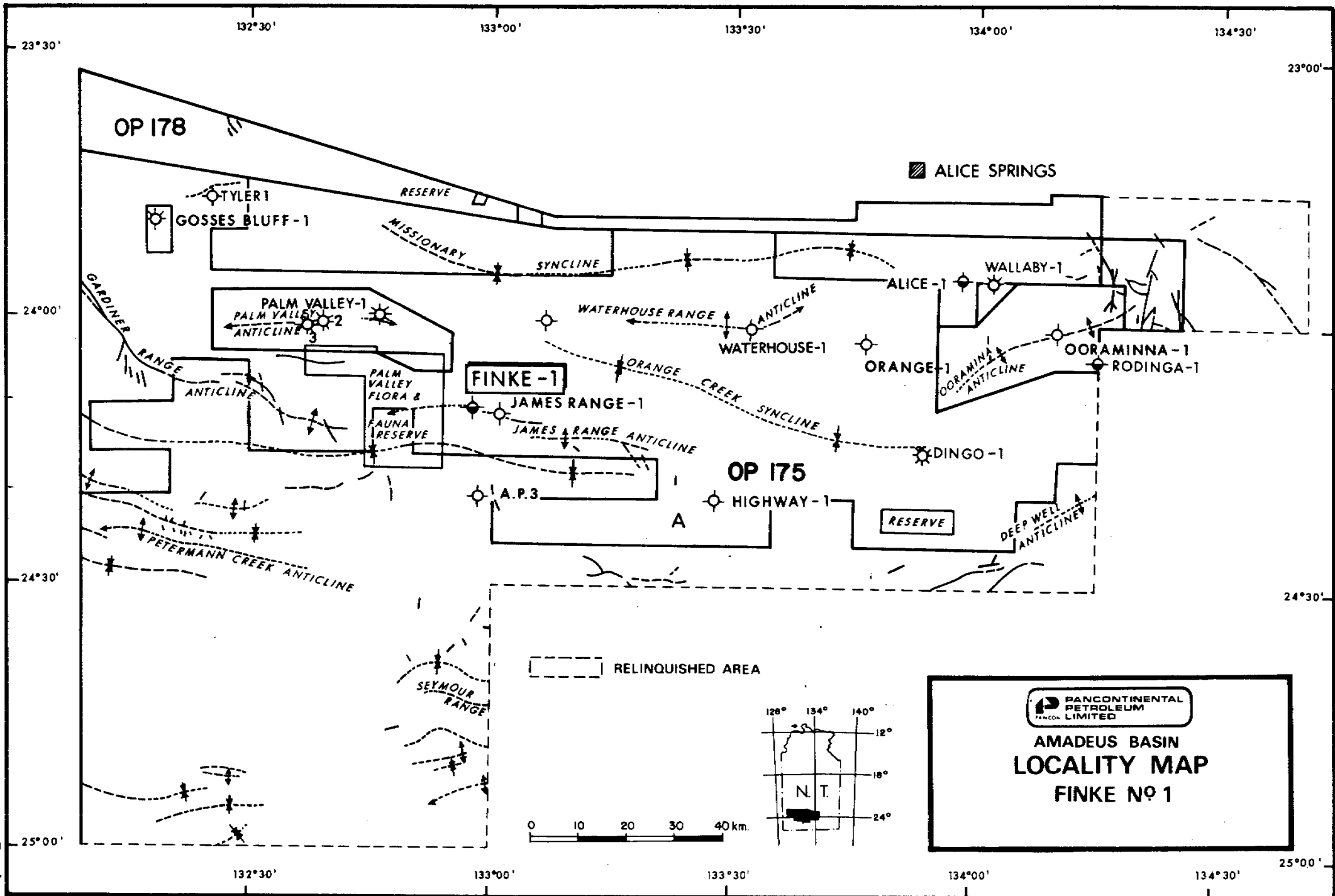


Fig. 1


**PANCONTINENTAL
PETROLEUM
LIMITED**
**AMADEUS BASIN
LOCALITY MAP
FINKE NO 1**

DST No. 1 was run over the interval 251.6 to 258.2 metres but no hydrocarbons were recovered, the section proving tight.

Coring with a salt polymer drilling medium continued to 279.3 metres with minor problems in being unable to retrieve the inner core tube at 277.8 metres and 288.9 metres. The drill string parted at 207 metres while coming out of the hole. The Bowen spear was run and engaged the fish on the first attempt. Coring continued until 363.65 metres when the pipe twisted off 21 metres below the rotary table. The fish was retrieved successfully on the first attempt.

Coring recommenced and continued down to 369.65 metres when the wireline parted while attempting to recover core and the drill rods twisted off at 234 metres. The fish was recovered successfully with the Bowen spear and the BOPs lifted to remove bunched up wireline from the well head. The BOPs were reconnected and coring continued to 402.65 metres when, in anticipation of prognosed porous formation, a leak-off test was carried out. This proved unsuccessful and an LCM pill was squeezed. A cement squeeze was made at 333 metres to cover known fractured formation where fluid loss had occurred previously. Cement was cored from 304.3 to 346 metres after which LCM bridges were washed to bottom at 402.65 metres. Twist off occurred at 231 metres while coring at 402.68 metres and the Bowen fishing spear was again successfully employed.

Coring continued to 446.65 metres with intermittent delays caused by power failures and rig repairs. Coring continued to 468.4 metres when the pipe parted at 219 metres. The fish was recovered on the first attempt. Coring continued to total depth of 509.3 metres when the string was pulled prior to running down hole logs.

British Plasterboard logs were run after which DST No. 2 was attempted. Leaking drill pipe aborted the first attempt. On the second attempt (DST No. 3) the tool failed to open for the final flow period and the string equipment was pulled out of the hole. Geoscience then ran three down hole logs and before DST No. 4 was run successfully. Geoscience then reran down hole logs and the well was plugged and abandoned. There was no velocity survey.

1.2 Geological

Finke No. 1 was drilled to a total depth of 509.3 metres on a surface defined anticline during April and May, 1983. The well was drilled primarily to assess the hydrocarbon potential of the Arumbera Sandstone and test the pre-Arumbera section. The stratigraphic succession was predicted to be similar to that drilled at James Range A No. 1, 7.5 kilometres to the east, and separated by a surface defined saddle from the Finke No. 1 site.

The well penetrated 214 metres of Cambrian shale and carbonate with minor sandstone, before encountering a very much reduced clastic sequence tentatively assigned to the Arumbera Sandstone. No hydrocarbons were encountered in this section. Below the 24 metres of ?Arumbera Sandstone the well penetrated 271.3 metres of Late Proterozoic dolomite and shale and reached total depth in the Bitter Springs Formation dolomites (Loves Creek Member). Minor shows of live oil were found in non-effective vuggy porosity in the upper dolomitic/shale section, but where effective porosity was encountered it proved to contain slightly brackish water indicative of flushing.

Finke No. 1 was plugged and abandoned as a dry hole and the rig released on May 22, 1983.

2. INTRODUCTION

The Finke Prospect was located 110 kilometres southwest of Alice Springs in OP 175, Northern Territory, Australia (Figure 1). The nearest well control is James Range A No. 1, 7.5 kilometres east, Palm Valley No. 1, 25 kilometres to the northwest and Highway No. 1, 55 kilometres southeast.

There was no seismic data acquired over the Finke Prospect: the structure was defined purely on outcrop information and photogeologic interpretation. The well was sited on the maximum gas seepage anomaly detected by a Vaporsearch gas sniffer survey of the James Ranges conducted in July, 1981. There was no anomaly associated with the dry James Range A No. 1 well to the east. Finke No. 1 tested the validity of the Vaporsearch technique as well as an independent closure west of James Range A No. 1.