

SUMMARY

1. Drilling

Broadmere No. 1 was drilled by Richter Drilling Pty. Ltd., Rig 9 for the Operator, Amoco Australia Petroleum Company. The well was spudded on the 15th May, 1984, at latitude 16° 19' 47.963" south, longitude 135° 19' 16.896" east. The rig was released September 1, 1984 after reaching a measured depth of 7133 ft. (2174.14 m.) and sidetrack depth of 6673 feet (2033.9m.).

2. Geological

Broadmere 1 was drilled to 7133 feet (2174.14 m.) through a sequence of sandstones, siltstones and shales. One intrusive was drilled in the Corcoran Formation. The well was scheduled to drill to 10,000 feet (3048 m.) but geochemical evaluation of the potential source rocks appeared overmature at the current total depth.

No significant hydrocarbon shows were found while drilling.

INTRODUCTION

Broadmere No. 1 was drilled in O.P. 191 (Fig 1) by Richter Drilling Pty Ltd., for the permit holder, Amoco Australia Petroleum Company. The cost of the well was shared equally with Kennecott Exploration (Australia) Ltd., (Sohio) who have a 50% interest in the permit.

The well was the first test of a large closed anticlinal structure in O.P. 191, McArthur basin. The prospect was interpreted to have favorable reservoir, seal and source sediments. Stratigraphic and structural relationships were determined over a three year period. In 1981 and 1982 a series of continuous diamond-drill holes and reconnaissance geological field mapping was conducted. In 1983, 333 line kilometers of seismic data were acquired over the Broadmere structure.

Surface geological studies indicated that potential source sediments are predominately in the peak stage of oil generation while timing of the structure was post-Roper Group and Pre-Paleozoic. This, combined with preservation of porosity as seen in the diamond-drill holes below the zone of weathering, made the Broadmere structure an attractive prospect.

However, the well was dry. Poor to no effective porosity was found in the Bessie Creek Sandstone Formation, Hodgson or Arnold Member sandstones. The presence of desiccated oil in the Bessie Creek was the only indication of hydrocarbons within the prospective reservoirs.

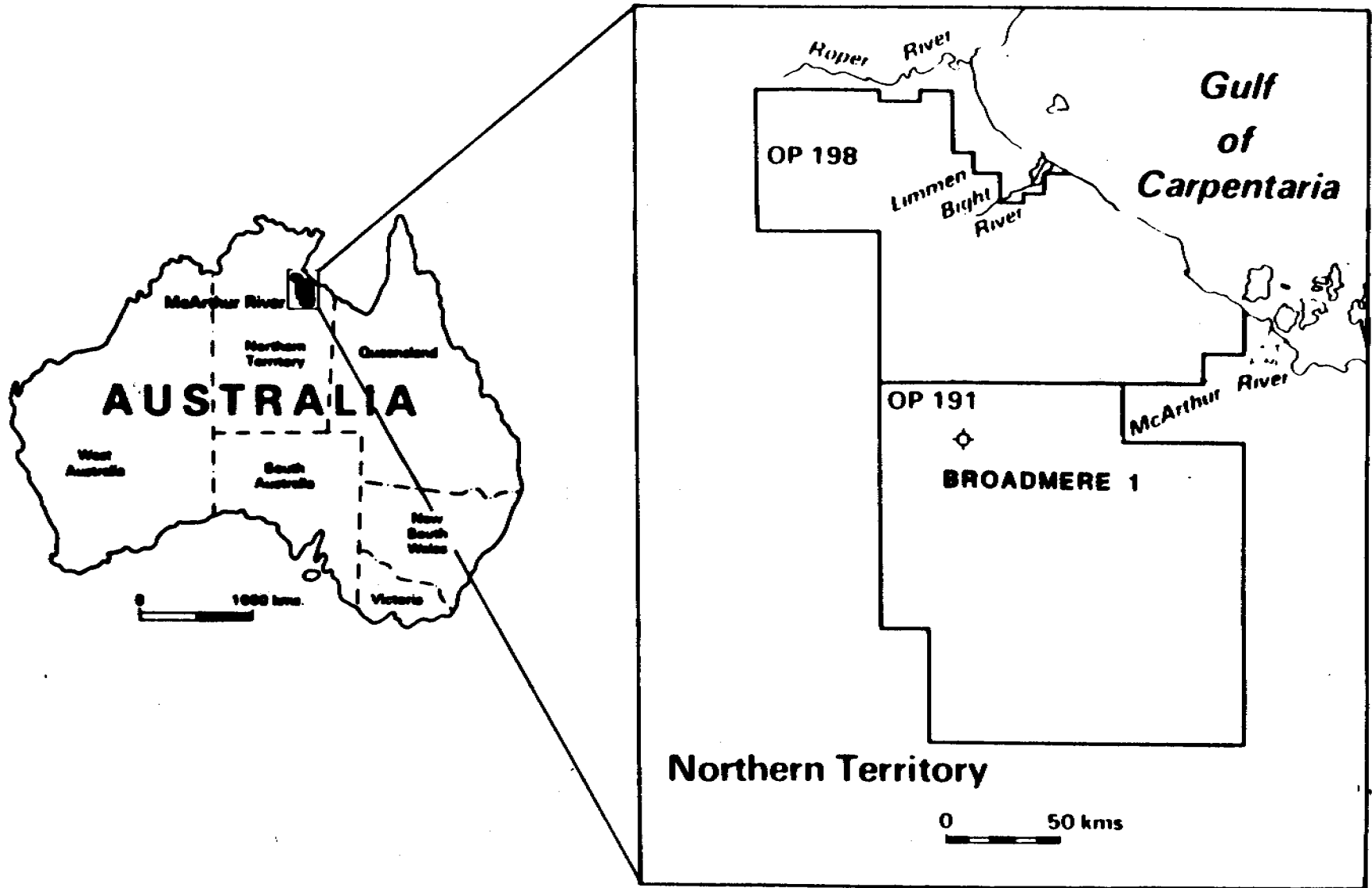


Fig 1

Drilling

1. General Data:

- i) Well Name : Broadmere
Well Number : No. 1
- ii) Operator : Amoco Australia Petroleum Company.
Address : G.P.O. Box 1723, Darwin
Northern Territory 5794.
Home Office : G.P.O. Box 949, North Sydney,
New South Wales 2060.
- iii) Titleholder : Amoco Australia Petroleum Company.
Address : G.P.O. Box 1723, Darwin,
Northern Territory 5794.
- iv) Petroleum Title : O.P. 191.
- v) District : Broadmere Station.
- vi) Location: Latitude : 16° 19' 47.963" S.
Longitude : 135° 19' 16.896" E.
- vii) Elevation : 555.4 ft. (169.3 m.)
RKB to Ground : 23.0 ft. (7 m.)

viii) Total Depth : Original Hole Side Track
7133 ft. (2174.1 m.) MD 6673 ft. (2033.9 m.)
7112 ft. (2167.7 m.)TVD 6655 ft. (2028.4 m.)

Bottom Hole Location

at last survey : 7080 ft.(2157.98 m.) 6639 ft. (2023.57 m.)

225.08 ft. (68.6 m.)S 190.25 ft. (58.0 m.)S
211.86 ft. (64.6 m.)W 228.19 ft. (69.6 m.)W

Closure and Direction

at last survey : 7080 ft. (2157.98 m.) 6639 ft. (2023.57 m.)
309.10 ft. (94.2 m.) 291.19 ft. (88.7 m.)
S43.3'W S49.9'W

ix) Spud Date : May 15, 1984.

x) TD Reached : 7133 ft (2174.1 m) on August 24, 1984.
6673 ft (2033.9 m) on August 30, 1984.

xi) Well Abandoned : August 30, 1984.

xii) Rig Released : September 1, 1984.

xiii) Drilling days

Spud to TD : 109 Days.

xiv) Status : Plugged and Abandoned.

xx) Total Cost : \$6,339,000 Aust. (est.).

2. Drilling Data:

- i) Name : Richter Drilling Pty. Ltd.
Address : G.P.O. Box 2197, Brisbane, QLD, 4001
- ii) Drilling Rig : Rig No 9.
Drawworks : National 110M.
Engines : 3 of Cat. D0398 at 825 HP ea.
Pumps : 2 of National 9-P-100.
Triplex 6½" x 9½".
Mast : Dreco 142' x 21' rated at 1000 kips.
Rotary : National C-275.
Drill Pipe : 12000 ft 5", 19.5 ppf, II.
Grade E, w/4½" x H TJ's.
Drill Collars : 6 of 9" w/ 7 5/8" H-90 conn.
12 of 8" w/ 6 5/8" reg. conn.
24 of 6½" w/4½" XH conn.
- iii) BOP's a) : 1 of 20" x 2000 psi WP Hydril
w/ diverter spool.
b) : 3 of 13 5/8" x 5000 psi WP CIW type
'V' ran preventers.
1 of 13 5/8" x 5000 psi WP Hydril
type 'GK' Annular Preventer.
c) : 1 of Drillco Rotating Head, w/ 13 5/8"
5000 psi WP lower flange.

- iv) Hole Sizes : 36" to 51 ft. (15.5 m.) RKB
 26" to 910 ft. (288.4 m.) RKB
 17½" to 3230 ft. (984.5 m.) RKB
 12¼" to 7133 ft. (2174.1 m.) RKB
- v) Casing Details
- Conductor : 30" : 309 ppf, 1" wall, Grade B.
 CSA 51 ft. (15.5 m.) RKB
 Cemented w/ 200 sx Class 'A' cement
 thru 1" pipe down annulus.
- Surface : 20" : 94 ppf, 0.438" wall, Grade X56
 w/ Vetco type L connectors.
- Tension : 1400 kips, Collapse : 514 psi
 Yield : 2144 psi.
 CSA 908 ft. (276.7 m.) RKB.
- Cemented w/ 857 sx of Class 'G'
 cement w/ 2.5% prehydrated gel
 to 12.8 ppg followed by 711 sx of
 Glass 'G' neat cement to 15.8 ppg.
 Top of cement was set under pressure
 (i.e., float shoe held against
 backflow).

A FIT below the shoe held the equivalent of 11.5 ppg.

Intermediate : 13 3/8", 68 ppf, 0.48" wall, K55
w/ buttress threads.

Tension : 1069 kips, Collapse : 1950 psi,
Yield : 3450 psi.

CSA 3224 ft. (982.6 m.) RKB.

Cemented w/ 2088 sx of Class 'G' cement with 1% CFR2 and 0.4% Halad 22A mixed to 15.8 ppg with full returns throughout. Top of cement is estimated at 975 ft. Cement was set under pressure (i.e., float shoe and float collar held against backflow).

A FIT below the shoe held the equivalent of 16.1 ppg.

Production : Well was Plugged and Abandoned by setting the following cement plugs:

Plug #1

5900-6200 ft. (1798.3-1889.8 m.)

300 sx Class 'G' cement.

Plug #2

5400-5700 ft. (1645.9-1737.4 m.)

300 sx Class 'G' cement.

Plug #3

3125-3525 ft. (952.5-1074.4 m.)

400 sx Class 'G' cement.

Plug #4

30-230 ft. (9.1-70.1 m.)

150 sx Class 'G' cement.

This well was left in condition to re-enter. The Braden head (A section) was left welded to the 20" surface pipe and a cover flange was fabricated to cover the head and 13.375" intermediate casing. This cover flange also incorporated a 6" pipe that stands 6 ft. above ground level with a 1" valve installed to relieve pressure. Welded to this stand - pipe is a sign that states:

Amoco Australia

Northern Territory

Broadmere #1

O.P.: - 191

16° 19' 47.963"S.

135° 19' 16.896"E.

Line 83-117 at Intersection of Line 83-120

The cellar and pits were back-filled so that the area remained as close as possible to its original state.

vi) Drilling Fluid

from Spud to TD. : Lightly treated fresh water gel system, wt, 8.7-9.0 ppg, 10-16 PV, 7-12 YV, 35-42 VIS.

vii) Water Supply

Water Well No. 1 : 339 ft. SE of well bore, 900 ft. (274.32 m.) TD.

Dry.

Water Well No. 2 : 1.25 miles NE of well bore, 400 ft. (121.92m) TD.

Dry.

Water obtained from various natural billabongs within a 35 km. radius of well bore.

viii) Perforation Record : No perforations were made.

ix) Plug Back and
Squeeze Cementation

Squeeze Cementation : Three cement plugs were spotted
across a lost circulation zone
from 5851 to 5873 ft. (1783.4-1790.0 m.)

Plug #1

100 sx Class 'G' neat at 16 ppg.

Plug #2

150 sx Class 'G' neat at 16 ppg.

Plug #3

150 sx Class 'G' neat at 15.8 ppg.

Plug #3 was used to stabilize the
hole against caving of this rubble zone.

Plug Back : After reaching 7133 ft. (2174.1 m.)
the well was plugged back to 6426 ft.
(1958.6 m.) in an attempt to meet
directional specifications.

This plug consisted of 440 sx, Class
'G', 16.5 ppg, .6% HR6.

x) Fishing Operations : During the entire duration of the well only two fishing jobs were needed. The first job was to recover bit cones that were run off while drilling. This occurred at 1517 feet (462.4 m.). Eight trips were made before recovering all three cones and most of the bearings. The total elapsed lost time for this fishing job was 27.5 hours.

The second job occurred at 5896 feet (1797.1 m.) when the drill string parted due to backing off from high torque. The drill string parted in two places and the fishing jobs were successful in recovering the drill string on the first attempts. The total elapsed lost time was 7.5 hours.

xi) Sidetracked Hole : After reaching 7133 feet (2174.1 m.) the well was plugged back to 6426 feet (1958.6 m.) in an attempt to kick off and meet directional specifications. The well was in the process of deviating off the cement plug when orders were given to plug the well.

- xii) Communications : Seven methods of communication were available at the rig site.
1. : HF Radio utilizing Brambles Corp. frequency.
 2. : HF Radio interfaced with Telecom via OTC Marine Coast Stations - Darwin/Sydney/Perth. (Telex)
 3. : VHF Radio ground to air, to communicate with inbound and departing aircraft.
 4. : Local UHF citizens band.
 5. : HF Radio VJY operators.
(Outpost radio network)
 6. : HF Radio OTC for Darwin office/
Rig Telex communications.
 7. : NDB - Non-directional beacon for inbound and departing aircraft.

C. Location:

- Transportation : a) Materials via road trains.
b) Personnel via fixed wing aircraft.