YOLLA-1 PROGNOSIS
EXPLORATION PERMIT T/14P
OFFSHORE TASMANIA

April 1985

Amoco Australia Petroleum Company

OR-0307

300002

Amoco Australia Petroleum Company
(Inc. in Delaware, U.S.A., with Limited Liability – Registered as a Foreign Company in Tasmania)

15 Blue Street, North Sydney
P.O. Box 126, North Sydney 2060
Phone (02) 957 4500
Telex AA23359
Facsimile (02) 922 4886

April 24, 1985

Director,
Department of Mines,
P.O. Box 56,
Rosny Park,
Tasmania 7018.

Dear Sir,

PERMIT T/14P APPLICATION FOR PERMISSION TO DRILL
WELL PROGNOSIS
MISC-AUP-157-L-400-SCB

Amoco Australia Petroleum Company, as Operator of the Exploration Permit T/14P in the Bass Strait, hereby applies for permission to drill well Yolla #1 to a total depth of 4267 metres (14,000 feet) to test sandstone objectives in the Eastern View Group, which is of Late Cretaceous to Eocene Age.

The well would be located at:

Latitude 39 degrees 50 minutes 18.96 seconds SOUTH
Longitude 145 degrees 48 minutes 21.20 seconds EAST
on seismic line HB73A-169 at Shotpoint 197 in a water depth of 80.5 metres (Attachment 1).

The enclosed Prognosis illustrates the structural position of the well, location, predicted lithology and the planned evaluation programme.

Yours faithfully,

STEVEN C. BANE
Exploration Manager

Enclosures

SCB/rkh

CONTENTS

WELL PROGNOSIS

The Yolla #1 well will test predominantly non-marine sandstones with intraformational shales acting as seals within the Eastern View Group of Late Cretaceous to Eocene age. The Yolla Structure is a faulted basement high feature which became reactivated in the Tertiary forming a structural trap with four-way dip and fault-associated areal closure. The predicted section for the well has been developed using the recently shot 1984 TNK 4 Survey and other reprocessed data, combined with a review of nearby wells and earlier mapping (Enclosure 1).Well ties were made to Bass #1, Tarook #1, Nangkero #1 and Poonboon #1 to confirm stratigraphy. Nangkero and Poonboon were particularly important as they penetrated section below the M. diversus zone which is postulated to be one of our prime reservoir objectives. Poor seismic data quality below the M. diversus hampered interpretation of deeper events and the picks are tenuous. Durroon #1, although distant from the proposed well location, is the only well that has fully penetrated the Late Cretaceous and intersected the Early Cretaceous and therefore was used as the model for that stratigraphic section. Volcanics may be penetrated within the Miocene section of the Torquay Group as seen in Bass #1.None of the wells reviewed had significant hydrocarbon shows, except for minor fluorescence and cut in some sands of the Eastern View Group in Aroo #1. Minor gas was recovered by Formation Interval Test (FIT) in one of the sands within the lower L. balmei. No drilling problems attributable to the formations were penetrated in the wells, except for some slight overpressure in the shaley basal portion of the L. balmei in Poonboon #1. The resultant kick was killed by raising the mud weight from 10.2 ppg to 10.8 ppg at a depth of 3189m and no further problems occurred.

EVALUATION PROGRAM

The evaluation program has been developed based on the following casing points measured below the rotary table:

Casing Size	Shoe	Formation
30"	170 M	Torquay Group
20"	380 M	Torquay Group
13 3/8"	1700 M	Demons Bluff
9 5/8"	as required	

Should indication of overpressuring be observed as in Poonboon #1, then it may be desirable to set the 9 5/8" casing to cover this interval after having given due regard to hole conditions and the possibility of formation damage to potentially prospective zones up hole.

Sampling Program

- Drill cuttings would be taken from the 20" shoe (380 metres) to Total Depth as follows:

Sample Type	Interval
Washed and Dried	5M samples from 380-2160M 3M samples from 2160-Total Depth Samples would be collected in paper or plastic bags
Wet (Paleo-Palynology/ Geochemistry)	15M Composites - cloth bags
Wet (detailed Geochemistry studies 13 3/8" shoe (1700 Metres) to Total Depth)	15M Composites - tin cans

- Conventional cores to more thoroughly investigate shows and potential reservoir rocks would be cut upon the recommendation of the wellsite geologist with concurrence of Amoco's Sydney Office.

Cores 3000m
3500m
4000m
+ Shows

- Sidewall cores would be taken only below the 13 3/8" shoe, as sufficient paleontologic and geochemical control can be obtained from cuttings. The sidewall cores would complement any conventional cores cut, and would be programmed to obtain detailed palynologic, geochemical and lithological data on a maximum spacing of 25 metres. Extra sidewall cores would be located around suspected unconformities and within zones of hydrocarbon shows.

100 SWC +

- Drilling fluid samples in 500 ml tins would be taken of make-up water and drilling mud each time there is a change in drilling fluids and prior to logging. These samples would be used as a check on mud filtrate properties for logging and testing programs.

Analytical Program

- Core Analysis

  Core Laboratories in Adelaide would do routine or special core analysis as the case may dictate.

- Age Determination and Geochemistry

  All paleontological, palynological and geochemical analyses, with the exception of vitrinite determinations, would be conducted by Analabs in Perth. The paleontologic analysis would be restricted to that portion of the hole above the Eastern View Group and would be analyzed every 100 meters from the 15 meter composite samples. This sample interval should be sufficient control for well correlation and subsidence profile analysis. Roger Morgan will do the palynologic work analyzing samples on a maximum interval spacing of 25 metres. Geochemistry samples would be analyzed from cuttings, sidewall and conventional cores. The analysis would consist initially of Rockeval pyrolysis, followed by more detailed hydrocarbon evaluation if good source rocks are penetrated. Detailed bitumen characterization would be done if free hydrocarbons are recovered. Vitrinite reflectance determinations would be done on eight (8) to ten (10) samples, spaced 250-300 metres apart over the Eastern View Group. Preferably the samples would be selected from sidewall and conventional cores and would be analyzed by Brian Watson of Amdel.

Wireline Logging Program

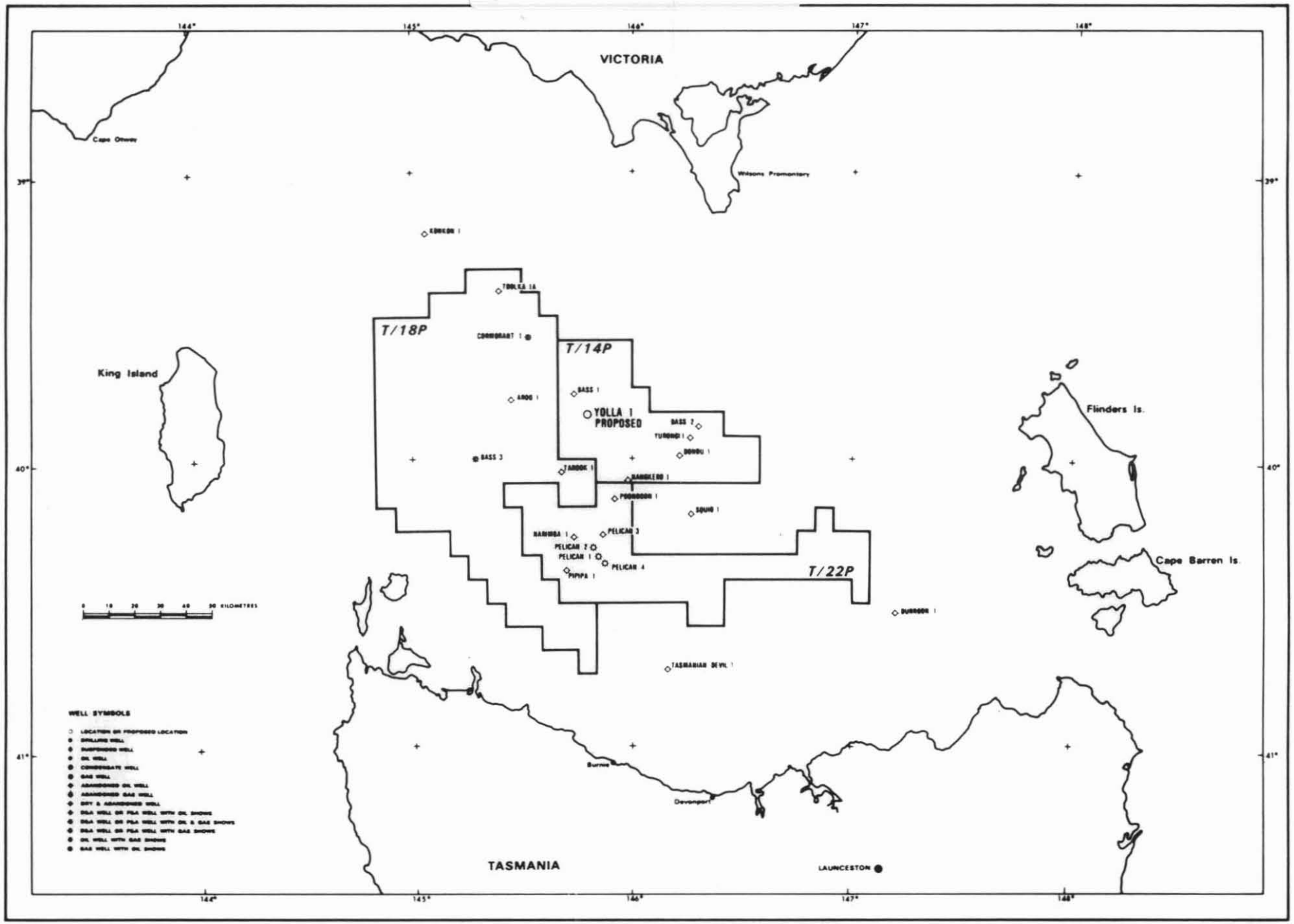
The following wireline logging program is planned (Schlumberger terminology):

Interval	Log Suite
20" to 13 3/8" Casing 380 to 1700 metres	ISF ~~DLL~~-GR-SP-MSFL-CAL(GR to Seabed) ~~LSS~~-GR-SP BHC
13 3/8" to Total Depth 1700 to 4267 metres	DLL-GR-SP-MSFL-CAL LDT-CNL-NGT LSS-GR-SP HDT VSP/VELOCITY SURVEY* CST

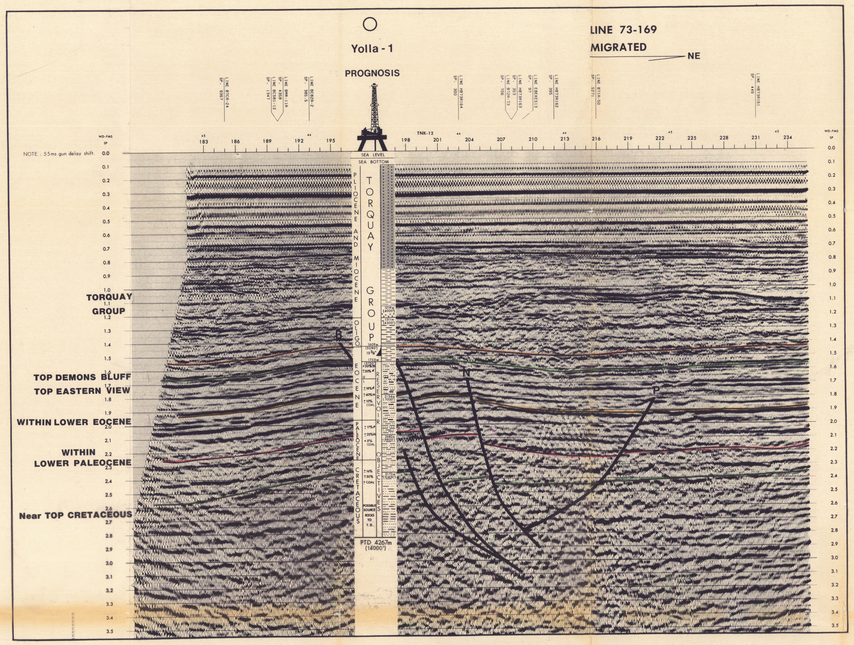
*(At Total Depth or earlier if required)

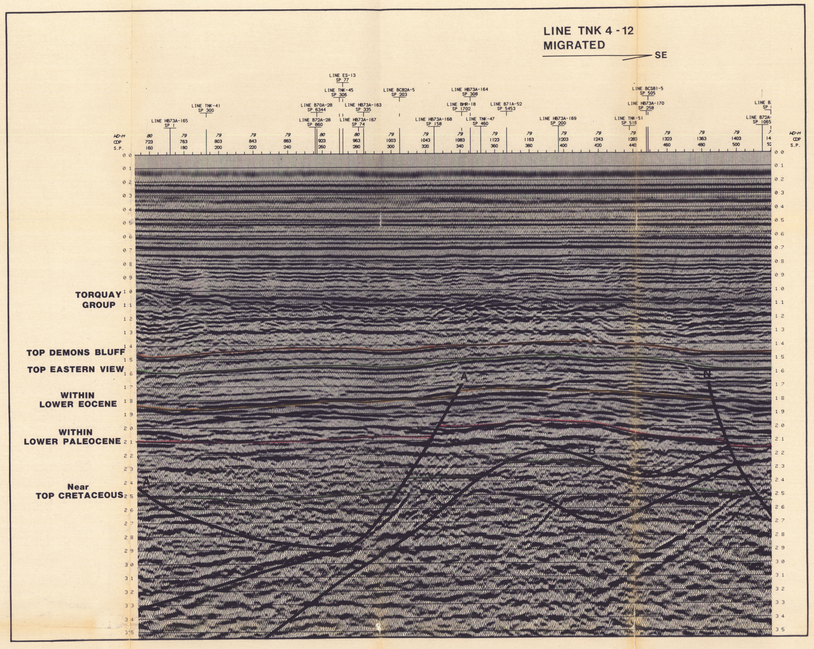
Testing Program

The decision to test the hole will be based on encouragement from mud log shows and wire line log analysis. The rig will be equipped to conduct both RFT's and conventional DST's through casing.

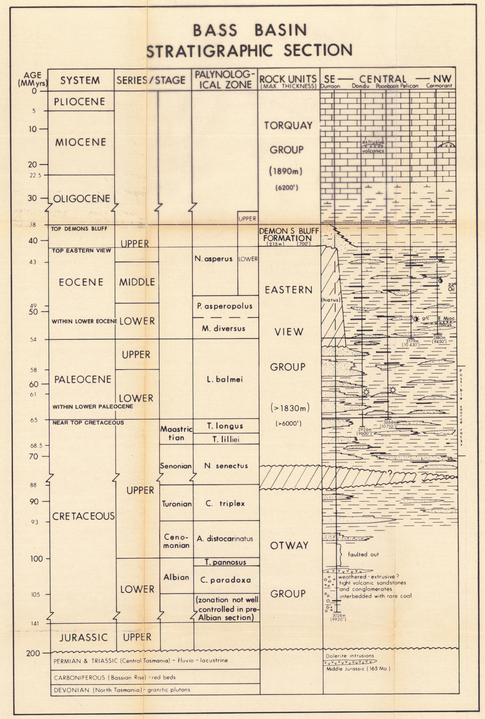


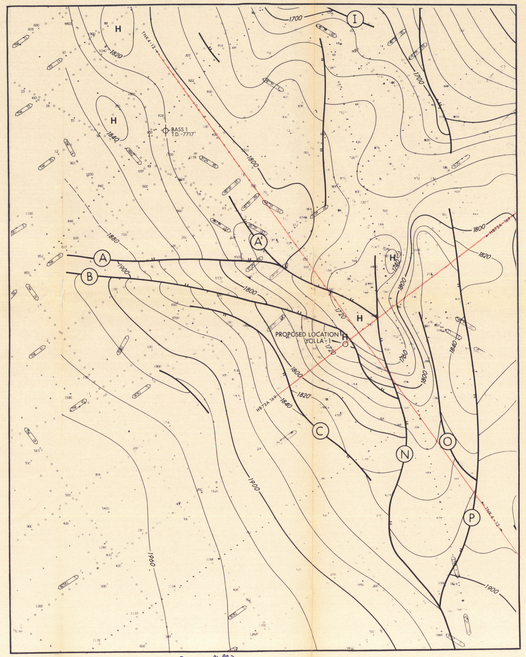
ATTACHMENT 1





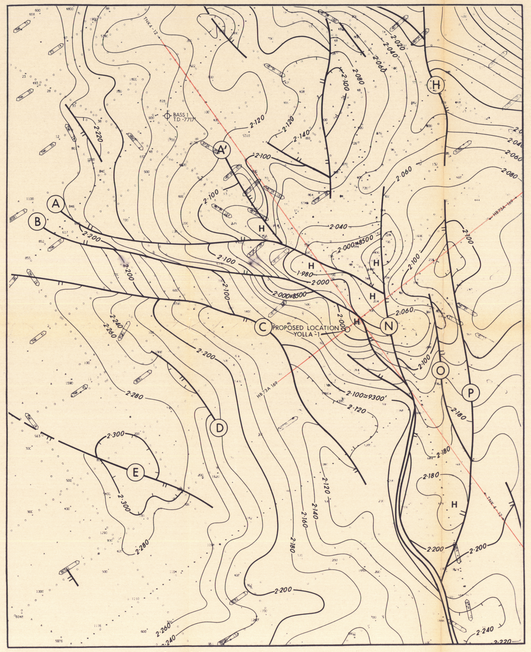
BASS BASIN STRATIGRAPHIC SECTION





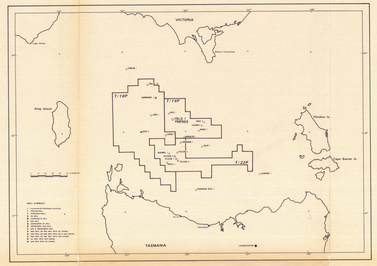
TIME STRUCTURE MAP (Top Demons Bluff)
ORANGE HORIZON
(within Lower Eocene)

1:50000
C.I. 20ms



TIME STRUCTURE MAP (Top Eastern View)
PINK HORIZON
(within Lower Paleocene)

1:50000
C.I. 20ms



AMOCO

Amoco Australia Petroleum Company

300005

Exploration Permit T/14P

YOLLA-1
Well Prognosis

Report No.		Enclosure No. 1	Authors: Brew, Fleming, Graves, Weibel
Date APRIL 1985	Scale	Drfn'm.	Dwg. No.

OR-0307