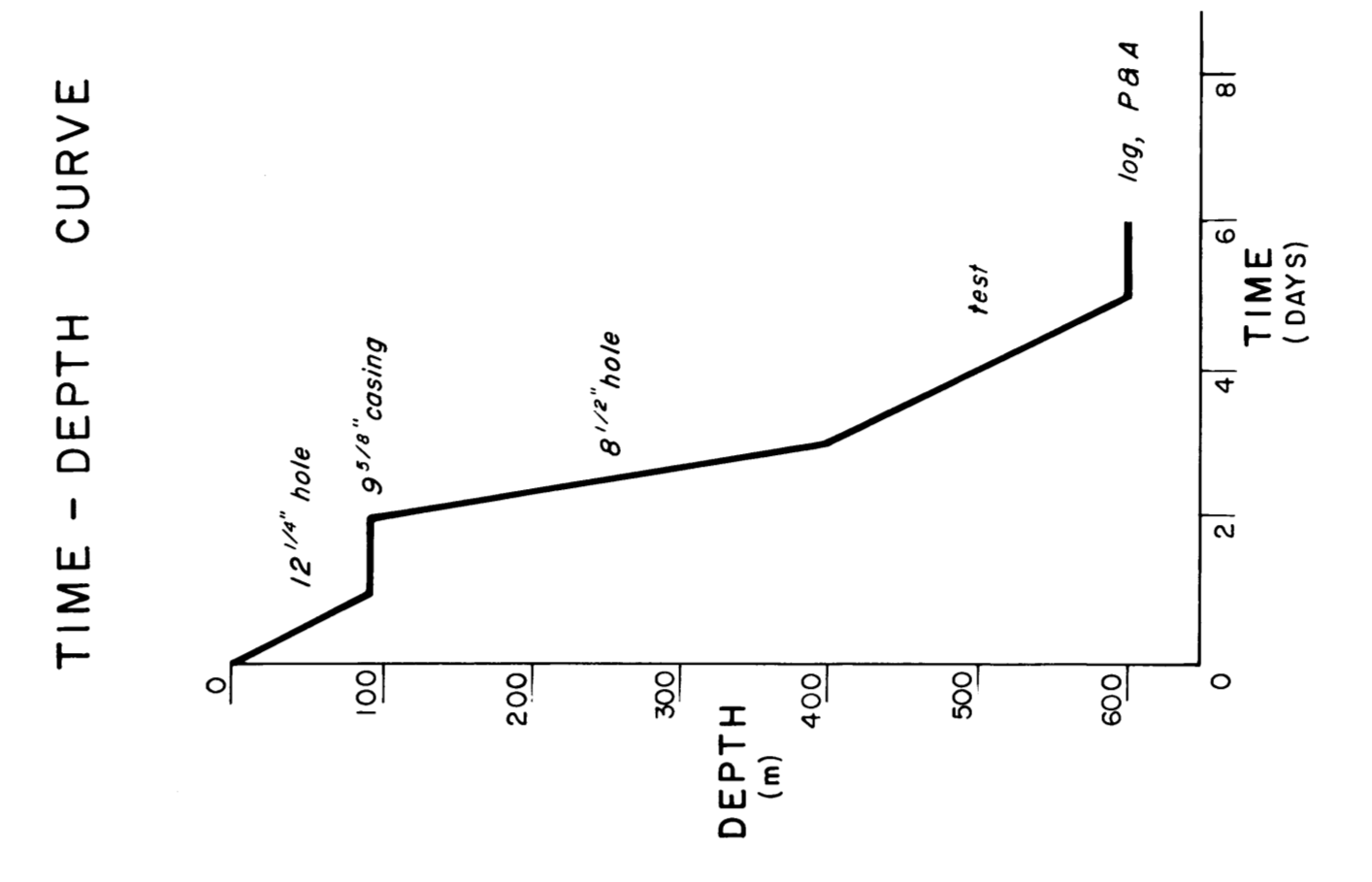


**Prospect name :** SOUTH CARAMUT - 1  
**Total depth :** 600 m  
**Elevation :** 150 m a.m.s.l. (approx.)  
**Classification :** Wildcat  
**Location :** Lat. 38° 00' 16", Seismic line 88 - 100  
 Long. 142° 28' 32", Shot point 430  
**Reservoir target :** Pretty Hill Sandstone  
 Top at 320 m b.g.l.  
**Area of closure :** 3 Km<sup>2</sup> (min)  
**Vertical closure :** 300m (along seismic line)  
**Estimated reserves :** Oil, 30-9 MMBBLS  
 Gas, 110 BCF  
**Recoverable reserves :** 18.5 MMBBLS  
**Significant nearby wells :** Woolsthorpe - 1, 17 Km S  
 Hawkesdale - 1, 18 Km SW  
 Pretty Hill - 1, 44 Km SW  
**Significant nearby facilities/markets :** Warrnambool 52 Km  
 Portland 115 Km  
 Geelong 184 Km  
 Adelaide 622 Km Melbourne 259 Km  
**Estimated cost :** Dry hole, \$ 200 000  
 Discovery, \$ 275 000  
**Operator :** LAKES OIL LIMITED  
**Permit holder :** LAKES OIL LIMITED  
**Farmince :** OTGAS N.L.

**AUTHORS :** A. Tobassi  
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**DATE :** May 1990  
**GEOPHYSICAL INTERPRETATION :** A. Tobassi  
 I. Buckingham  
**DRAWN BY :** MinCarto  
**DRG No.**



**JUSTIFICATION**  
 The South Caramut Prospect is designed to test the hydrocarbon potential of the porous & permeable Pretty Hill Sandstone in a specifically defined faulted anticline at a relatively shallow depth.  
 The reservoir target the Pretty Hill Sandstone, consists of clear to fine, fine to medium to coarse grained quartzose sandstone with garnet and minor kaolinitic clay matrix. Its reservoir characteristics is believed to be excellent with the maximum log determined porosity of 32% in Woolsthorpe - 1 (some 17km to the SW) and permeability up to 275 millidarcies in Pretty Hill - 1 (4km to the SW).  
 Furthermore, oil fluorescence has been recovered in this potential reservoir in a number of samples from the Pretty Hill Sandstone in the vicinity of the discovery in the Katook field in the South Australian portion of Otway Basin was from the Pretty Hill Sandstone reservoir.  
 The structure at the Pretty Hill Sandstone level is believed to be independent of the minor faults present within the prospect. That is to say that the overlying clastic has not been breached and is effectively sealing the reservoir.  
 The South Caramut Prospect is ideally located to trap hydrocarbons sourced from sediments within the Ardara Trough to the south west. Migration of hydrocarbons from the mature oil & gas prone Otway Group as well as early dominant Caserton Formation source rock is possible via a number of major faults present to the south of the prospect. In addition, the step nature of the flank of the anticline may provide a secondary seal to the reservoir. The presence of a secondary seal is likely to be derived from mature source rocks to the reservoir without the complications of long distance migration.  
 The hydrocarbon geochemical survey which was recently carried out within the PEP 122 along the seismic line 88-100 recorded a number of hydrocarbon compounds which are characteristic of hydrocarbons associated with the South Caramut Prospect. This is a significant finding of hydrocarbons associated with gas microseepage in which as Ethane and Propane Ratios may be indicative of a more liquid hydrocarbon source at this prospect.  
 With facilities and market at close hand any reasonable recoverable hydrocarbons produced from the South Caramut Prospect is considered commercial.

ERA	PERIOD	GROUP	FORMATION	NEWER VOLCANICS?	SEAL	DEPTH (meters)	SEAL SOURCE
CAINOZOIC	TERTIARY	HEYTESBURY GROUP	PORT CAMPBELL LIMESTONE			0 - 10	
			CLIFTON			10 - 250	
MESOZOIC	LOWER CRETACEOUS	OTWAY GROUP	CRAWFISH FORMATION			250 - 300	
			GELTWOOD BEACH			300 - 600	
PALAEOZOIC		BASEMENT	PRETTY HILL SANDSTONE				

