

**T/26P Interpretation and Review.**

**Valmap Proprietary Limited, Victoria Petroleum NL**

**OR-0400**

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See letter 17/2/95  
T/26P-QAP

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## RE: T26/P INTERPRETATION AND REVIEW

### SUMMARY:

*Interpretation of seismic in the northwest sector of T26/P and the southern part of VIC/P31 has indicated the presence of several large leads and one prospect. The prospect, with a prominent DHI, straddles the VIC/P31 and T26/P border with the majority of closure lying within T26/P. None of the other leads have any DHI evident and all require much greater seismic definition*

### INTRODUCTION

The project was to interpret the northern part of T26/P with the aim of defining structural prospects. The northern boundary of T26/P is taken at 39° 12'S. From this interpretation Victoria Petroleum would then be in a position to decide whether to go forward with a proposed farm-in to the T26/P licence.

Permit T26/P is located in the southeastern part of the Otway Basin and covers 5860 sq Kms. Two wells have been drilled in the block - Prawn-1 and Welk-1 - both dry holes. Nearby wells that provided key stratigraphic ties into the licence are Eric the Red-1 and Mussel-1.

The forthcoming work programme commitment is for the acquisition and processing of 1550 Kms of seismic in 1995. The cost of this programme would be approximately \$2million.

### REGIONAL GEOLOGY:

T26/P lies in the southeastern sector of the Otway Basin. The Otway Basin has fluvial-lacustrine sedimentation during Late Jurassic-Early Cretaceous and paralic to pro-deltaic sedimentation during the Late Cretaceous. The Otway Basin had open marine sedimentation since the Early to Mid Tertiary.

The main geological section of interest in this area is the Late Jurassic-Early Cretaceous. Several regional unconformities are noted in the area and include:-

- A. An unconformity at the top of the Otway Group within the Lower Cretaceous
- B. An unconformity and sequence boundary at the top of the Upper Cretaceous Shipwreck Group. This has been referred to as the 90 million year sequence boundary. It is this sequence boundary that is the main event mapped in this project as it represents the primary reservoir target (ie top porosity below the Sherbrook Group regional seal)
- C. An unconformity at the top of the Sherbrook Group

The Cretaceous was the final phase of deposition prior to continental rifting in the area. The Cretaceous was laid down on the Precambrian-Palaeozoic block faulted basement. The end of the Cretaceous saw the deposition of Tertiary on the Upper Sherbrook eroded surface.

The general boundary of the permit to the east is the Sorrell fault which is a large left lateral wrench fault.

Prawn-1 was drilled by Esso in 1968 to a depth of 3220 metres. It was located on a horst in an area of complex faulting. Prawn-1 is noted for its very sandy section and absence of any regional seal. The Sherbrook Group is very sandy as it is influenced by clastics shed from the Sorrell Fault high to the east. Thus the search for a substantial regional seal restricts the best petroleum trap potential to the northwest sector of the licence. It is this area that has been the focus of seismic interpretation in this project.

#### SEISMIC INTERPRETATION AND LEADS AND PROSPECTS IN NORTHWEST T26/P

The two prime well ties utilised in this interpretation are from Prawn-1 and Eric the Red-1.

The northwest sector of T26/P is covered by a broad 7x7 km grid of generally poor seismic of predominantly 81 and 82 vintage data. This broad grid allows much interpretation latitude to linkage of faults and thus lead interpretation.

Three leads and one prospect are recognised in the subject area:

- PROSPECT A**
- Prospect is covered by a 3x3 km grid of 1981 and 1982 data
  - 20 sq kms in area with vertical closure of 400 feet
  - The prospect has a prominent DHI at 1250 msec on Line OMQ81-30. The DHI extent matches the closure of the prospect on line OMQ81-30.
  - Trap potential of Prospect A is 665BCF of gas. The majority of this prospect is mapped within VIC/P31.
- LEAD B**
- Tilted fault block of 16 sq kms area and 250 feet of vertical closure
  - Defined on only two seismic lines - poor seismic definition
  - Possible trap potential of 300 BCF
- LEADS C & D**
- Tilted fault blocks of 45 sq kms and 3 sq kms respectively
  - Both leads have poor seismic coverage

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Northwest corner lead - There is a prominent large south dipping horst in the northwest corner of the licence. However, critical northerly dip is not evident on seismic within T26/P. Seismic(91vintage) lying adjacent to this lead in VIC/P31 was not available for inspection to confirm northerly closure.

**CONCLUSION:**

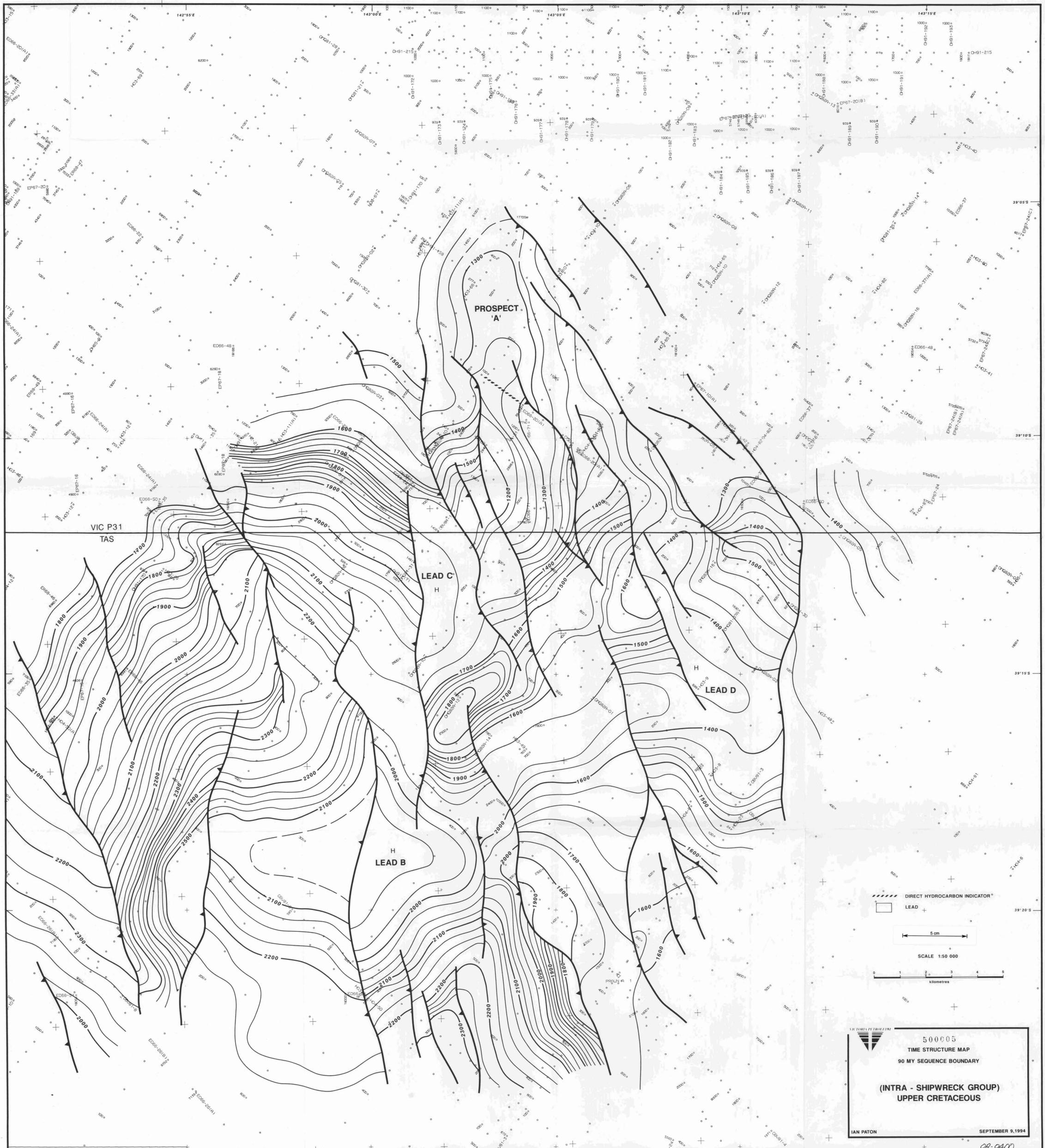
T26/P is primarily a gas play. It is the northwestern part of the licence that has the best potential for petroleum accumulation given the probable development of regional seal in this area. None of the leads maps in this area have evidence of DHI's - however this must be tempered by the fact that the sparse seismic is of generally poor quality. The primary gas potential and lack of DHI's on the leads in the most geologically attractive part of T26/P would not favour farmin.

**ATTACHMENT 1**

Structure contour map of 90MY

Sequence boundary, TWT map, 1:50,000 — NOT WITH REPORT





DIRECT HYDROCARBON INDICATOR

LEAD

5 cm

SCALE 1:50 000

0 1 2 3 4 5  
kilometres



50005  
TIME STRUCTURE MAP  
90 MY SEQUENCE BOUNDARY

(INTRA - SHIPWRECK GROUP)  
UPPER CRETACEOUS

IAN PATON

SEPTEMBER 9, 1994

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