

234001

BASS BASIN PERMIT

T-19-P

AN INTERPRETATION OF THE 1985

EAST/WEST WING SEISMIC SURVEY

AND RECOMMENDATIONS FOR FUTURE STRATEGY

**523/64/TL/HH
BRIDGE OIL LIMITED
APRIL, 1986**

*TPR
OR-0218*

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1. Introduction:

The 668.97 km East/West Wing Seismic Survey was acquired in November 1985. The objective was to highgrade those prospective areas of the permit which were deemed not to have been adequately covered by modern marine seismic data. To complete the primary term work requirements, permit obligations called for the drilling of four wells by March 1987. Only one drillable prospect existed, namely Seal (drilled in February 1986). In order to evaluate the remaining hydrocarbon prospectivity prior to any decision on relinquishment, the East/West Wing Seismic Survey was approved. Enthusiasm for the programme was predicated on the Amoco offset activity in T-14-P and their success at Yolla-1, although oil shows had previously been recorded in offset well Cormorant-1. The T-19-P permit has sparse well control with only the Konkon-1 (drilled 1973) and Seal -1 (drilled February 1986) wells offering seismic ties within the block.

The T-19-P permit has modest thicknesses of Eastern View Group sediments (Late Cretaceous - Late Eocene) over a small portion of the block. Historically, the top Eastern View Group play has been the one most actively pursued in the Bass Basin. Although potential objectives exist over the entire sequence, this may be too thin over large areas of the Bass Basin covered by the T-19-P permit.

2. Conclusions:

Two leads have evolved from the 1985 East/West Wing Seismic Survey but neither is considered drillable.

A promising lead (named West 1, Figure 2) is recognised on the downthrown side of the central fault in the West Wing area. A fault closure is mapped at the "Mid Cretaceous Unconformity" level and also at the "Near Top Paleocene" level. Significant structuring is present in the section bounded by these two markers and is probably due to volcanism of post Mid-Cretaceous age.

A weak structural lead is recognised along the basin's eastern edge, between 'Top Paleocene' and the 'Basement' (named East 1-2, Figure 2) closed in an up-dip direction against a fault.

3. **Recommendations**

1. The joint venture farminees seek a 60 day extension from Perthshire (Weaver) to integrate the results of the East/West Wing Seismic Survey with previous data in order to fully assess the blocks remaining prospectivity.
2. Further interpretation should be carried out on the lead recognised on the downthrown side of the central fault in the West Wing area (lead West -1).
3. The structural lead (East 1-2) is considered to be of higher risk and no further work is recommended for the East Wing area at this stage.

4. General Data4.a. Permit Status

The T-19-P permit is in the sixth and final year of its primary term with a renewal date of March 26, 1987. Remaining obligations on the permit involve the drilling of three wells; two are delayed wells deferred from year 5 and the third is scheduled for year six.

4.b. Participants

Under a farm-in agreement with Perthshire, certain companies have the option to earn their interests as stated by completing a seismic programme (minimum expenditure of \$300,000) and drilling one exploration well. These obligations have been fulfilled.

Bridge Oil Ltd (Operator)	15.00% *
Belco	22.00% *
Cluff Oil	5.50% *
Kimberley Oil & Gas N.L.	10.00% *
Winton Oil	5.50% *
Peko Oil	11.00% *
Perthshire (Weaver)	15.50%
Champlin	15.50% *

	100.00%

The farminees indicated above (*) have 60 days after the rig release of the Seal No. 1 well i.e. by April 22, 1986, to exercise their option to continue participation and to reimburse certain historical costs to Perthshire, alternatively they can forfeit their equity and reassign their interest to Perthshire.

5. Interpretation of the 1985 East/West Wing Seismic Survey5.a. Geological (Well) Control for T-19-P

Within the permit, well control is provided by Konkon-1 and Seal 1. In the offset permits T-14-P, T-18-P operated by Amoco, stratigraphic control is provided by Bass Nos. 1 and 2, Yurongi-1 (T-14-P), and Cormorant-1, Toolka-1 (T-18-P). Table 1 gives drilling statistics for these wells:

Stratigraphic columns for Konkon-1, Seal-1, Bass-2 and Yurongi-1 have been enclosed. These show the general sedimentary sequence for this part of the Bass Basin and the distribution of reservoir and seal within it (see also Aquing, 1980). Regional seismic markers are also indicated.

Major hydrocarbon source potential is thought to be restricted to the deep graben depoaxes, with updip migration mainly along faults. Although hydrocarbons have been encountered in Yolla-1 and Cormorant-1, the onset of oil generation occurs at very deep levels of at least 8,500ft (Weaver, 1983).

5.b. Interpretation of East/West Wing Seismic Survey

Bridge Bass '85 (phase two) seismic survey, also called East/West Wing, commenced on November 17, 1985 and ended on November 23, 1985 after completing all 42 lines. The total seismic data acquired amounted to 668.97 km.

GSI was the contractor for the survey and used the M/V Eugene McDermott II for acquisition.

The data were processed by Western Geophysical in Singapore. The final migrated sections became available for interpretation in the second week of March 1986. The data are of good quality.

TABLE 1

Well	Spudded	Water* Depth	KB*	TD*	Shows	Bottom Hole Stratigraphy
Bass-1	21.7.65	81	9	2352	-	Upper M. diversus
Bass-2	14.4.66	81	9	1801	-	Lower balmei over volcanics of? age over early Paleo- zoic.
Cormorant-1	11.6.70	73	30	3001	oil/gas: 20,000cc 22° API oil on FIT at 1500m.	Lower M. diversus over volcanics of ? age
Konkon-1	13.5.73	70	10	1537	-	T.longus over volcanics of ? age
Seal-1	10.2.86	65	25	1670	-	Upper L. Lalmei over volcanics of ? age.
Toolka-1	16.1.73	79	10	2715	-	Lower M. diversus
Yurongi-1	3.7.73	83	10	2438	-	Lower L balmei

Table 1. Drilling statistics for wells which provide stratigraphic control for T-19-P. All depths are in metres.

East Wing

Stratigraphic control for the East Wing area is provided by Bass -2 and Yurongi -1 wells.

No significant structural closures were mapped in this area.

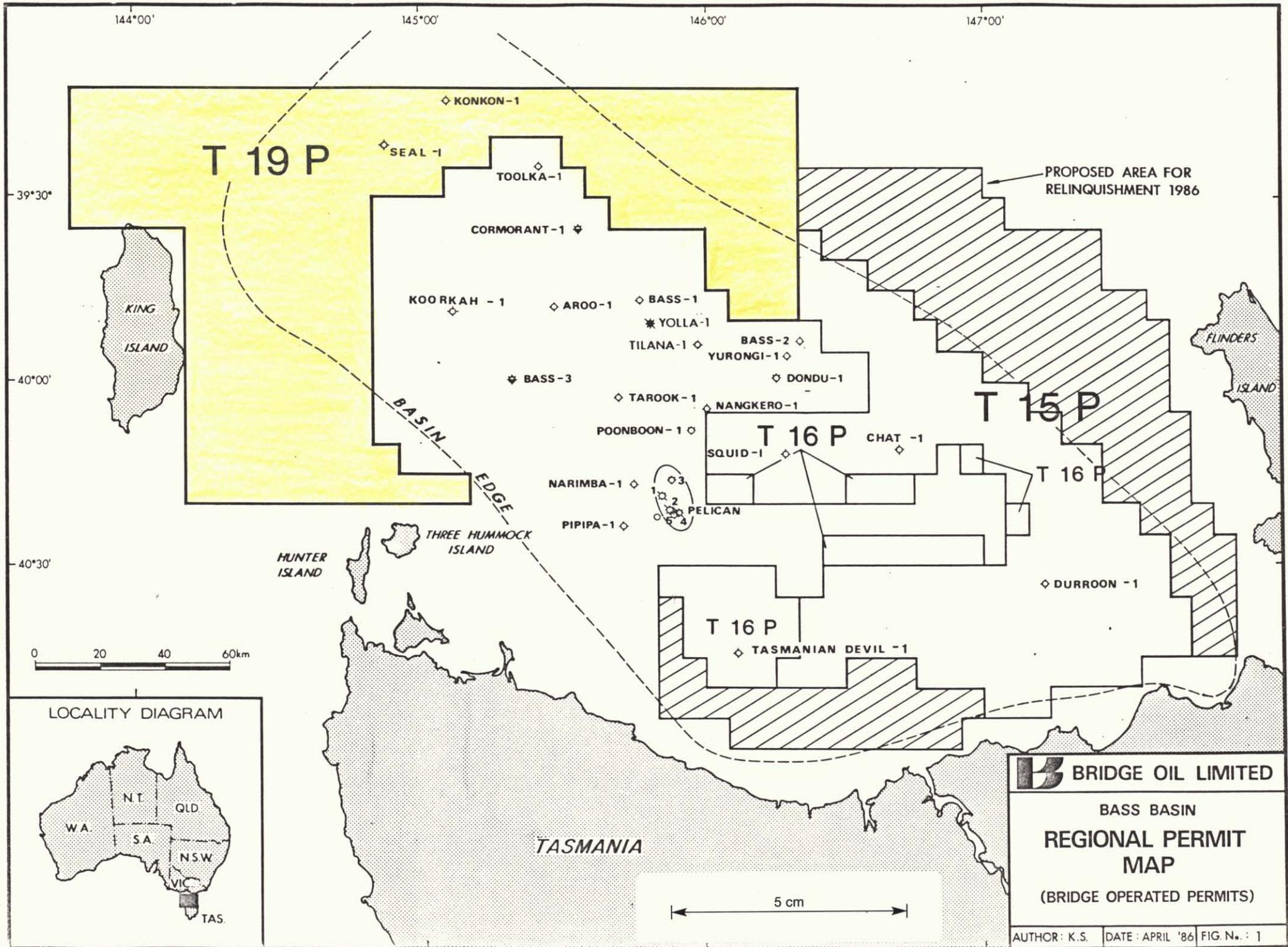
The only possible play which could be suggested is defined as a fault truncated sequence of thin Paleocene sediments, which are sandwiched between Paleocene volcanics and basement.

This play occurs at the eastern edge of the Bass Basin. Although the potential structural closure is large (approx. 70 sq km), the sediments are thin and shallow. Also, more seismic control is needed to define precisely the position of the fault(s). This lead is regarded to be of extremely high risk.

West Wing

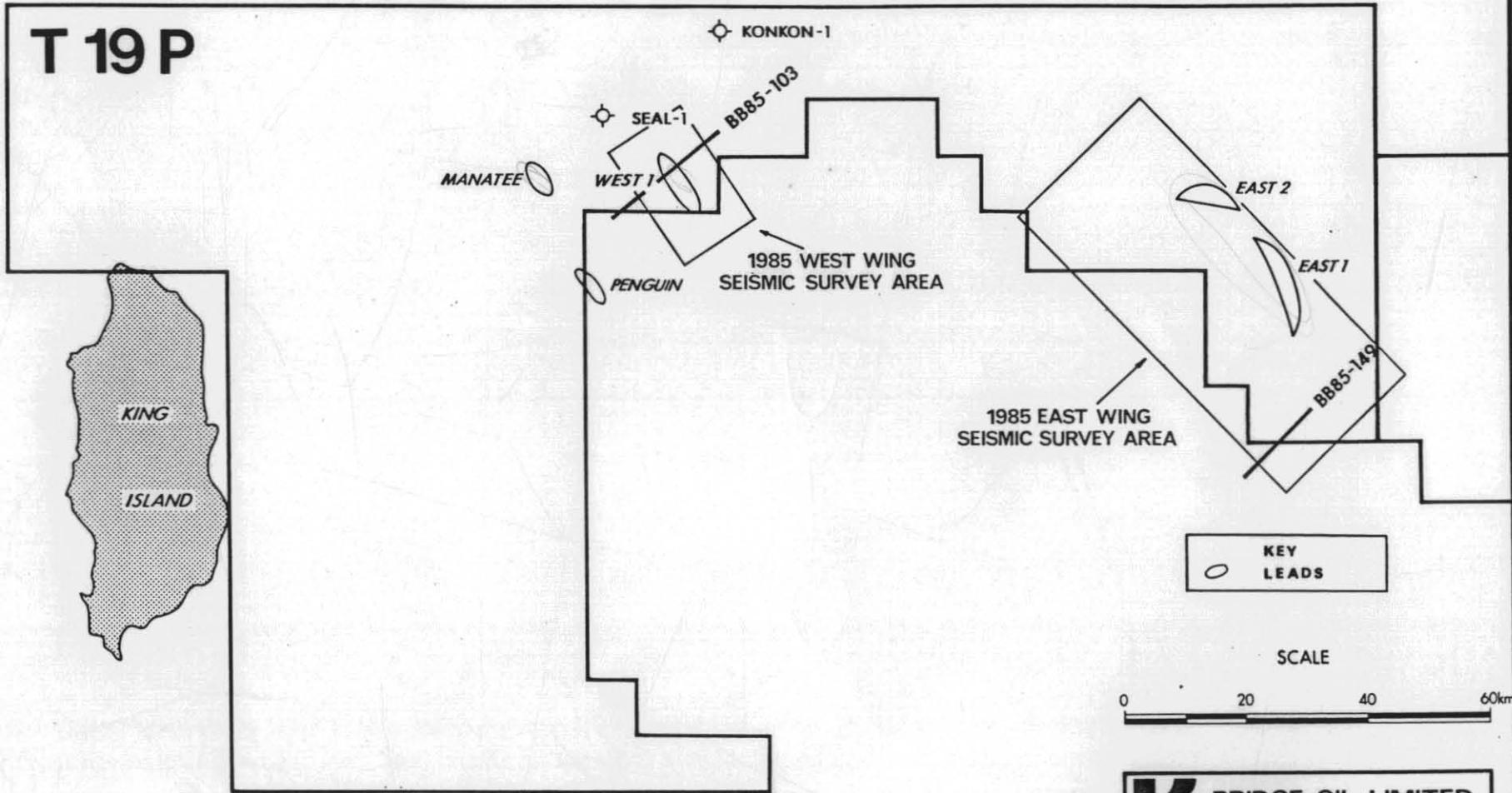
Stratigraphic control for the West Wing area is provided by Seal -1 and Konkon -1 wells.

This area is characterized by a series of fault-controlled deep grabens trending SE-NW. Several fault closures are mapped along the central fault (see maps) on its downthrown side at both the "Unconformity" level and "Paleocene" level. A thick section of volcanics is interpreted above the unconformity. This lead is considered the most interesting one of those mapped within T-19-P. The anomaly can be best illustrated by line BB 85-62 at sp 150 to 300 and time 2.0 to 2.4 sec. There is also interesting structuring below the unconformity which has, as yet, not been mapped.



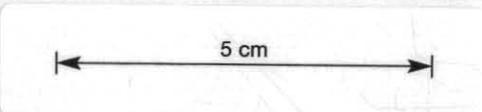
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T 19 P



○ KEY LEADS

SCALE



B	BRIDGE OIL LIMITED	
BASS BASIN - T 19 P		
PERMIT MAP		
WITH LEADS & PROSPECTS		
AUTHOR : K.S.	DATE : APRIL '86	FIG.No.: 2

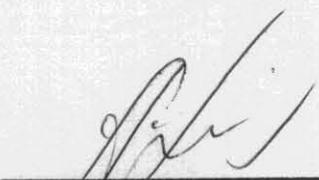
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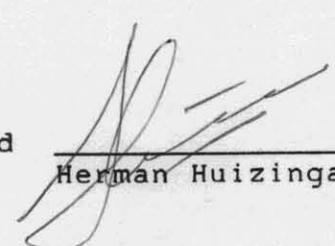
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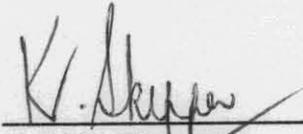
Toly Luskin

and



Herman Huizinga

APPROVED BY:



Keith Skipper