



7 April 2009

Companies Announcements Office
Australian Securities Exchange Limited
10th Floor, 20 Bond Street
SYDNEY NSW 2000

Dear Sir/Madam

Advent Energy Presentation

Excellence in Oil and Gas Conference, 6 & 7 April 2009, Sydney.

MEC Resources Ltd (ASX:MMR) advises that its investee entity Advent Energy Ltd (Advent) is presenting today at the Excellence in Oil and Gas Conference, Sydney.

A copy of the presentation is attached.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'D. Breeze'.

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Notes:

In accordance with ASX listing requirements, the geological information supplied in this report has been based on information provided by geologists who have had in excess of five years experience in their field of activity.

MEC is an exploration investment company and relies on the resource and ore reserve statements compiled by the companies in which it invests. All Mineral Resource and Reserve Statements have been previously published by the companies concerned. Summary data has been used. Please refer to relevant ASX releases for details and attribution. Unless otherwise stated all resource and reserve reporting complies with the relevant standards.

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Offshore Sydney Basin – Significant Gas Features

(ASX: MMR 23 March 2009)

- Investee entity Advent Energy Ltd has interpreted significant gas features in its exploration data for the PEP11 offshore Sydney Basin project
- Advent has previously reported the prospective P10 unrisked gas resource estimate of 16.3 trillion cubic feet for the permit
- Key indicators of hydrocarbon accumulation features were interpreted from the ongoing review of 2004 seismic data
- If confirmed by drilling, these seismic features are of immense significance to any commercial development of the project.



ADVENT ENERGY LIMITED



Offshore Sydney Basin – Significant Gas Features

(ASX: MMR 23 March 2009)

- The seismic evidence of extensive gas generation and migration is continuing to be examined by Advent and independent geologists and geophysicists
- In a further step towards commercial development of the project, Advent has appointed lead consultants RPS Group for the environmental planning and approvals process
- DU-EL Drilling Services has been appointed for well construction and project management to assist with the next stage of the project's development
- Advent is continuing to pursue joint venture discussions and is looking to secure an appropriate drilling rig to test PFP11

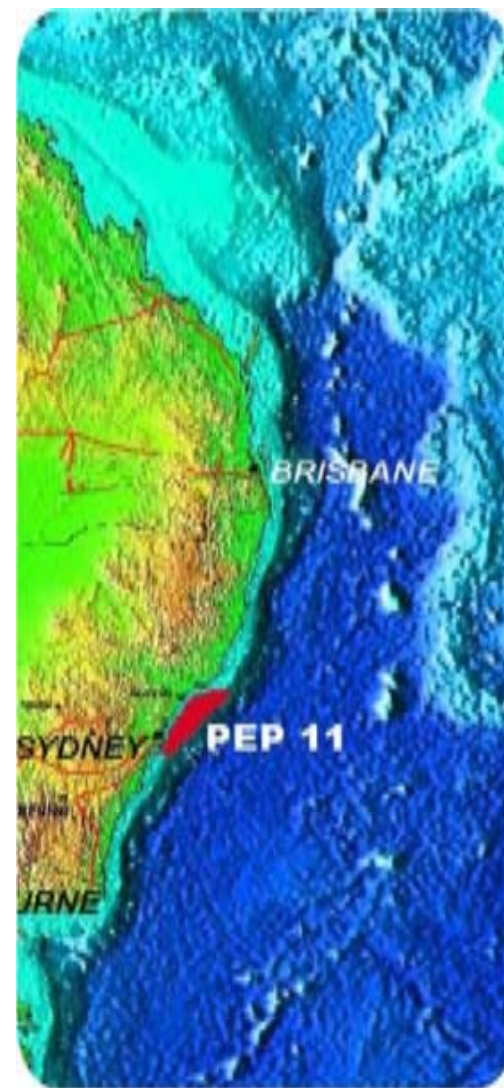


ADVENT ENERGY LIMITED

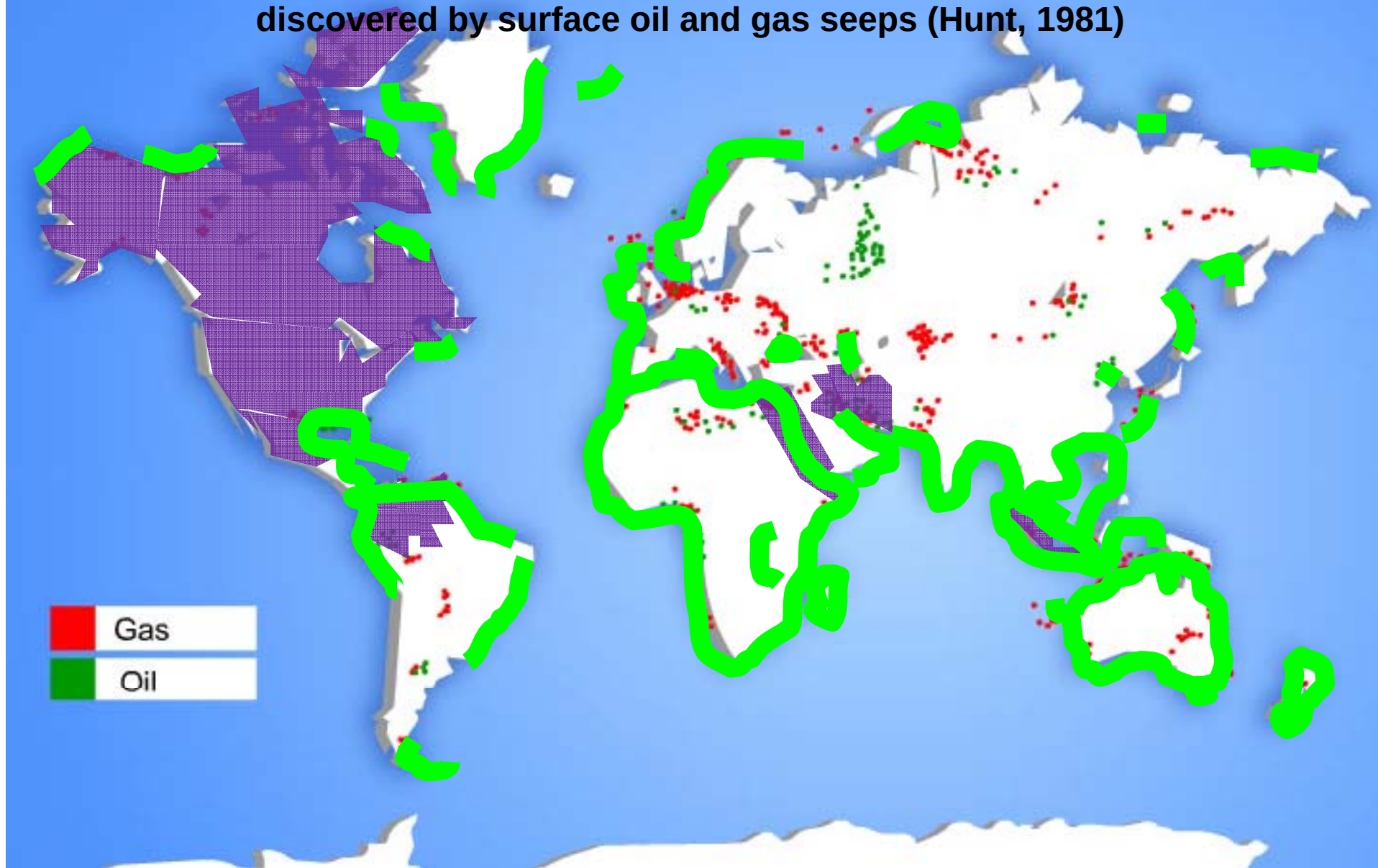


Offshore Sydney Basin : PEP 11 Summary

- NSW/PEP 11 covers 8100 sq km; Advent – 85%
- Permit Prospective Recoverable Resources estimated at up to 16.3 Tcf
- 20 km from Australia's largest energy market, world class infrastructure
- Gas flow and gas/oil shows in Sydney Basin Onshore wells / flows in excess of 1 million cubic feet of gas per day
- Active thermogenic hydrocarbon system demonstrated offshore
- Possible gas/condensate-charged Permian and Triassic reservoirs / Excellent potential for discovery of gas and oil
- Robust Economics: $NPV_{10} > \text{A\$12 billion}$ potential



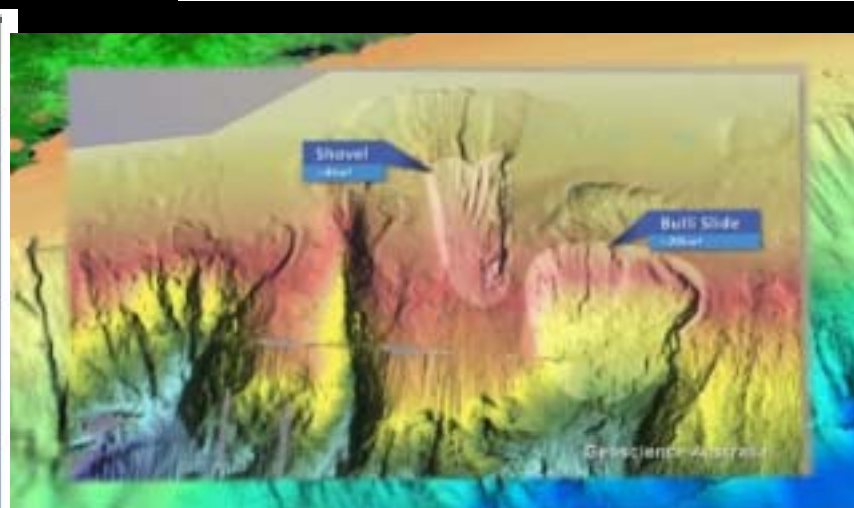
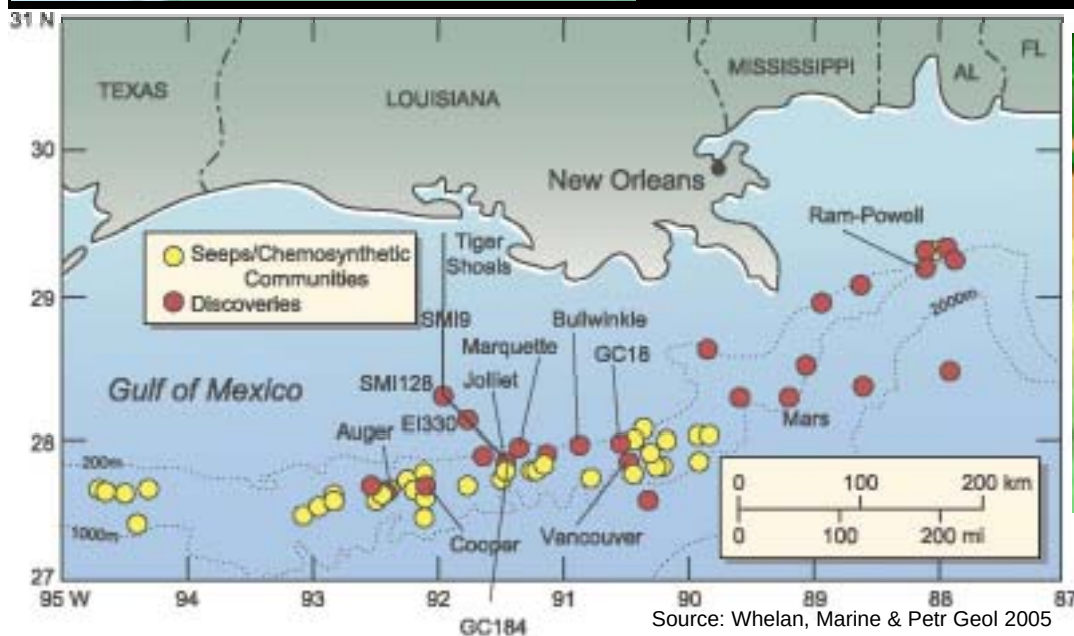
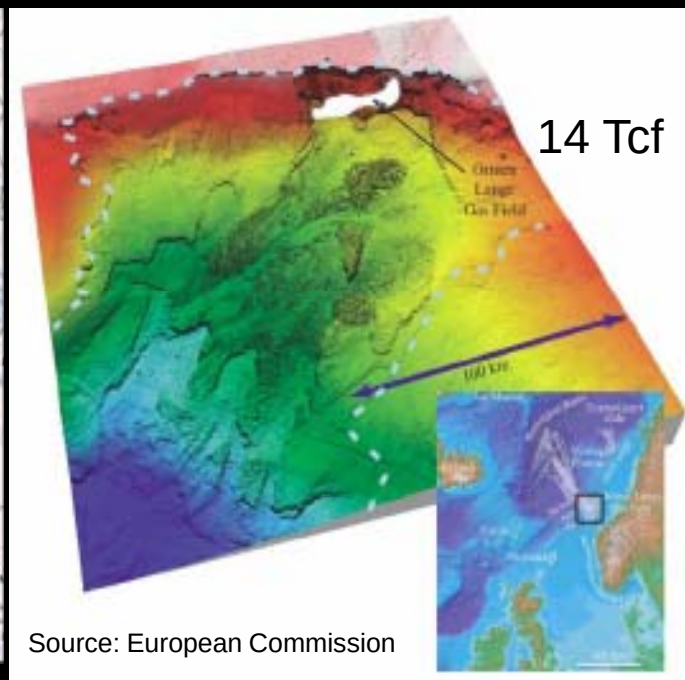
Nearly all the important oil producing regions of the world were first discovered by surface oil and gas seeps (Hunt, 1981)



Worldwide Oil & Gas Fields

(source: Total – www.planete-energies.com, and Link, W.K., 1952, Significance of Oil and Gas Seeps in World Oil Exploration, Bulletin of the AAPG, Vol. 36, No. 8), and Indicative satellite coverage of NPA Group, acknowledgement to Alan Williams
Mike Rego, Aminex

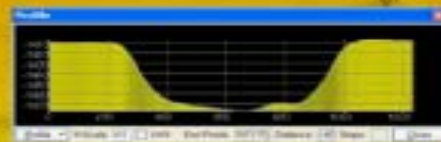
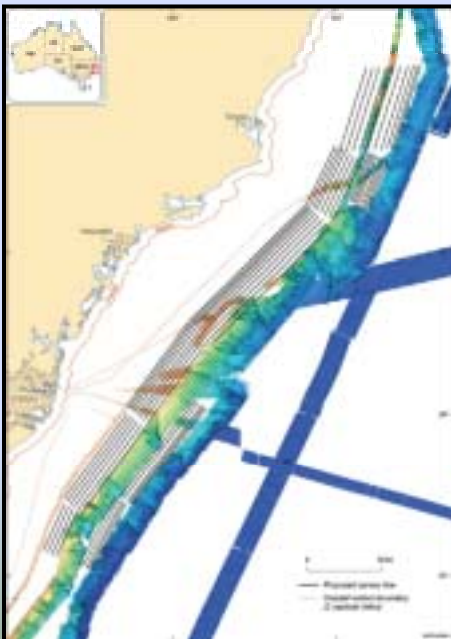
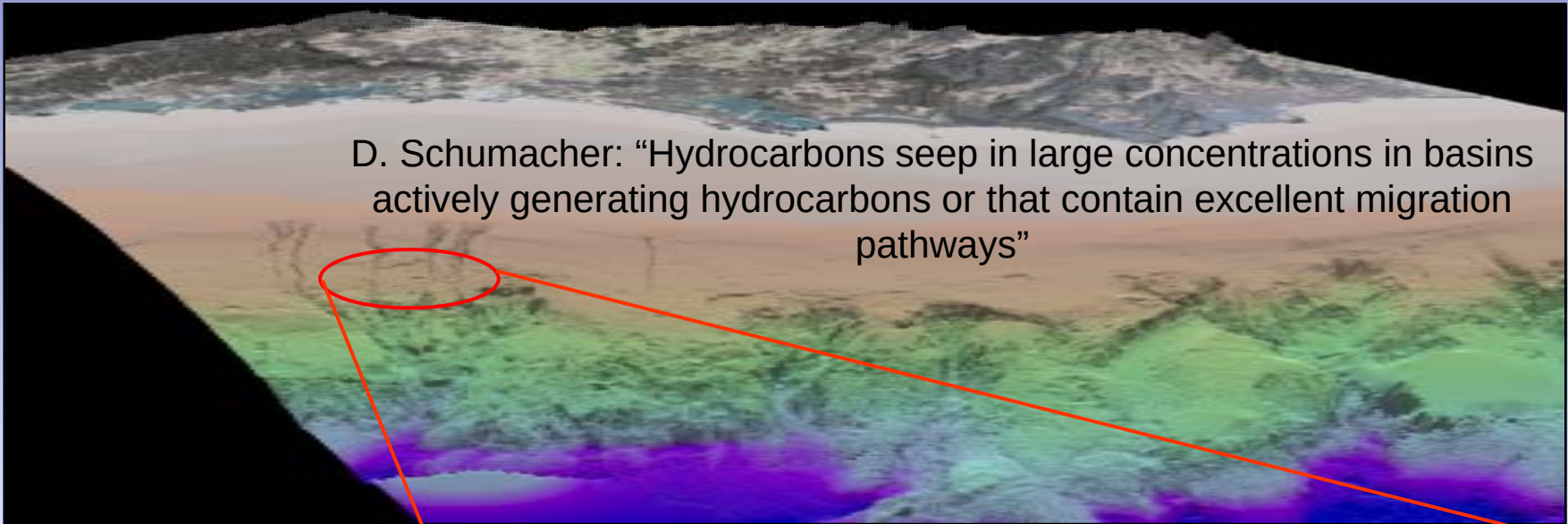
Slope failure, Gas seepage. Major HC Provinces



Slumps: over 28 cu. km

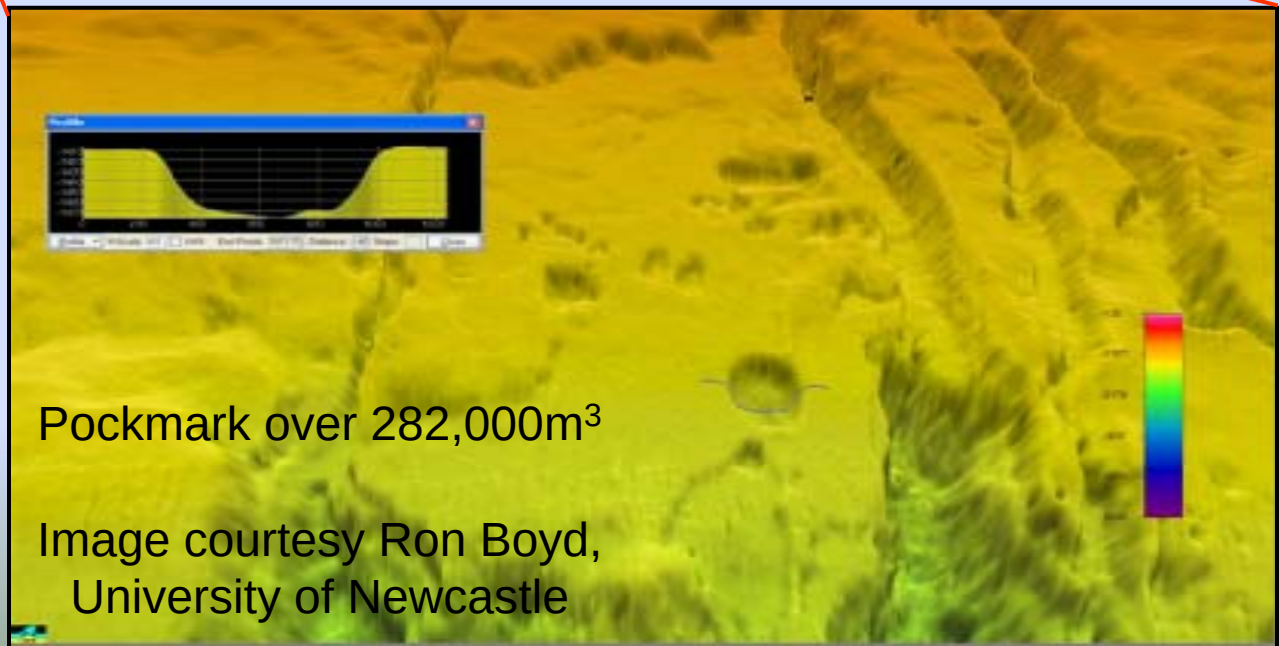
Swath Survey 2006

D. Schumacher: "Hydrocarbons seep in large concentrations in basins actively generating hydrocarbons or that contain excellent migration pathways"

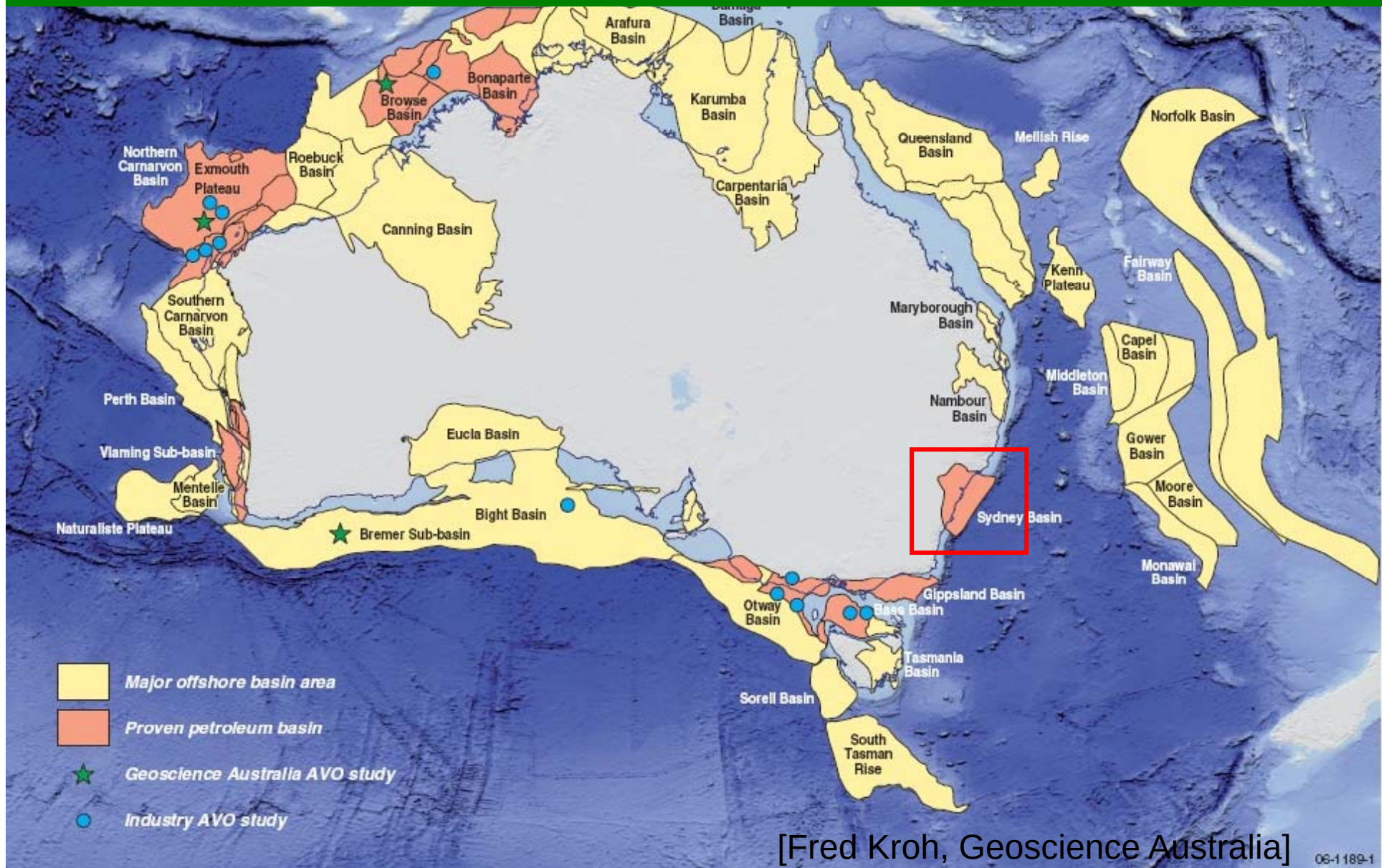


Pockmark over 282,000m³

Image courtesy Ron Boyd,
University of Newcastle

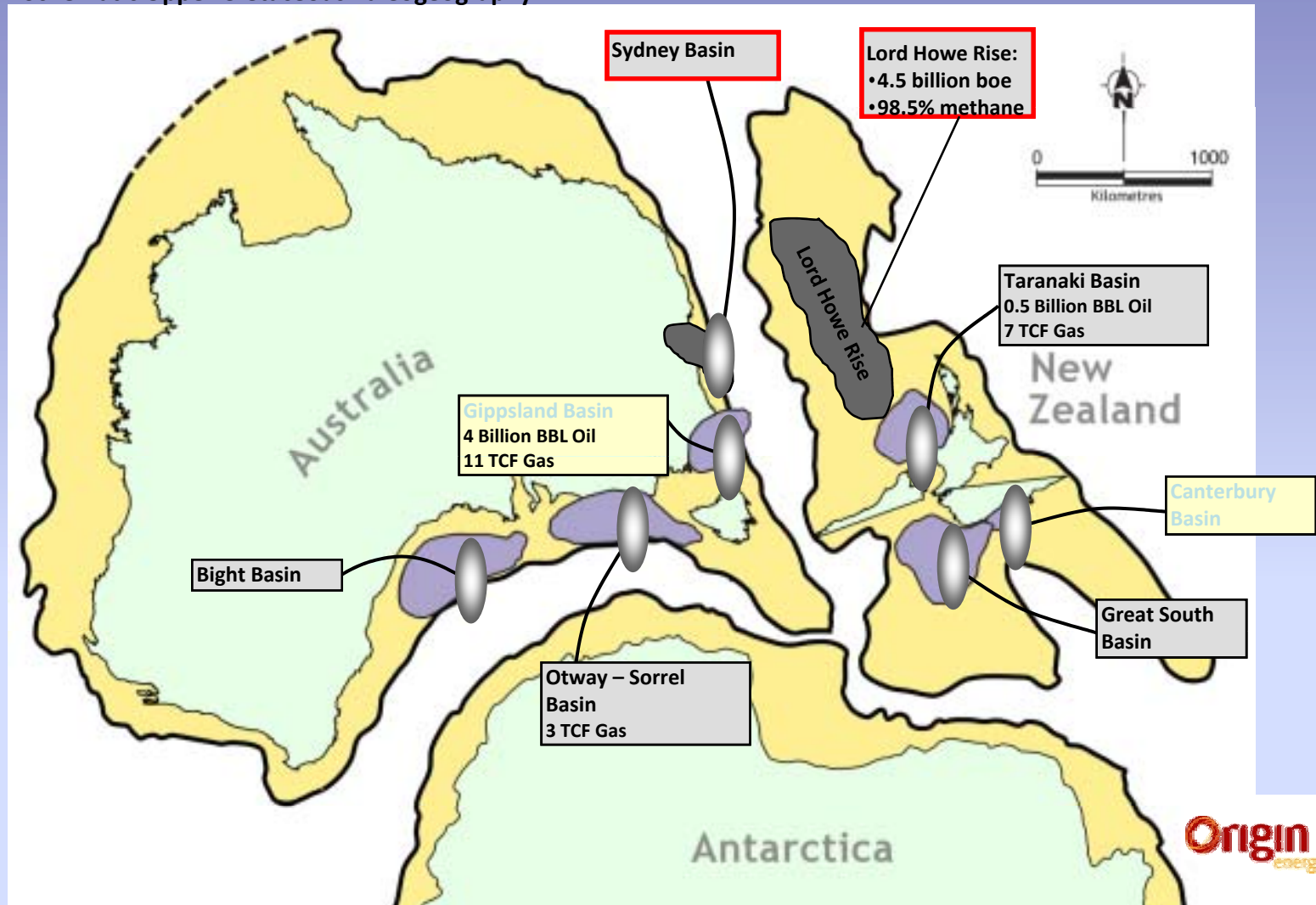


Offshore Sydney Basin--A Proven Petroleum Basin With Potential Huge Gas Reserve – Prospective Recoverable Resources of 16.3 Tcf estimated for the Permit.



...this is not surprising as these basins were located close to each other in the Cretaceous and had a similar evolutionary history

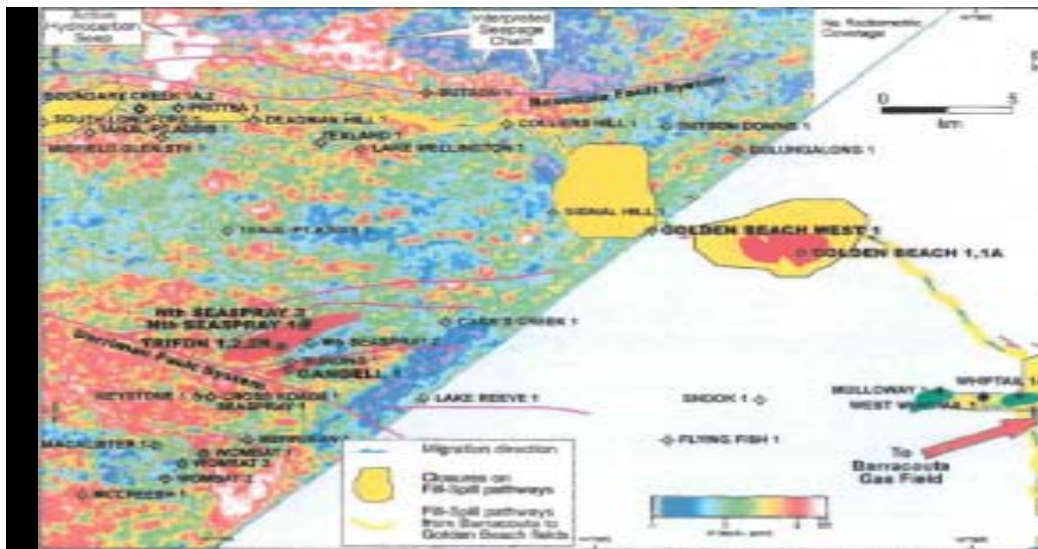
Schematic Upper Cretaceous Paleogeography



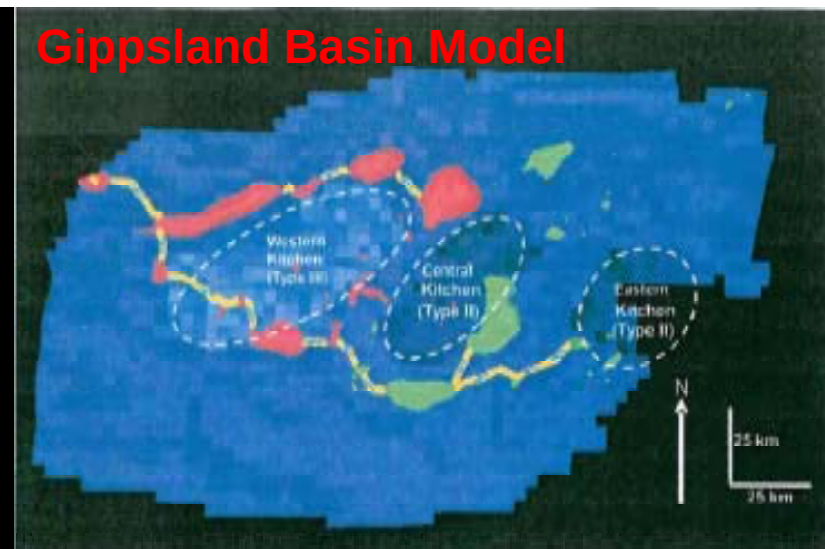
“...sea floor spreading commenced at 65-70 million years before present resulting in the separation of the Lord Howe Rise from the east coast of New South Wales (NSW Bureau of Mineral Resources)”

“a speculative estimate of petroleum resources within Australian jurisdiction on the Lord Howe Rise is about 4.5 billion barrels of oil equivalent (Willcox & Symonds, 1997)”.

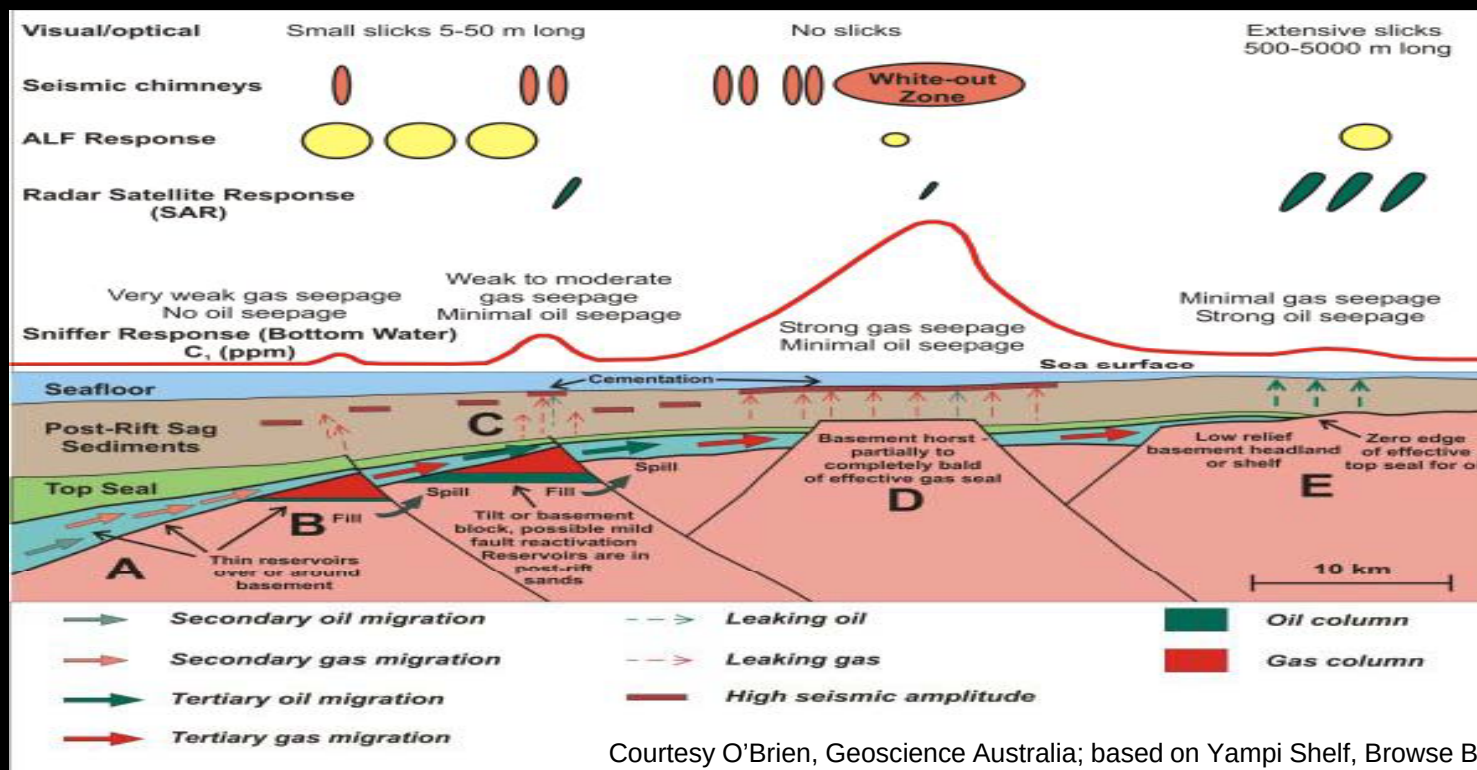
“Ocean Drilling Program (ODP) Leg 164 recently drilled three locations on the crest of the Blake Ridge to assess the composition and amount of gas in its gas hydrate deposit (Paull et al, 1996). All gas recovered exceeded 98.5% methane.”



Gippsland Basin Model



Yampi Shelf Model



Courtesy O'Brien, Geoscience Australia; based on Yampi Shelf, Browse Basin

Chimneys and pock marks indicating focus areas of fluid flow above the top reservoir

"From the many studies performed in hydrocarbon basins from all over the world we have learned that seismic chimneys are visible in 90% of all Mesozoic and Tertiary basins."

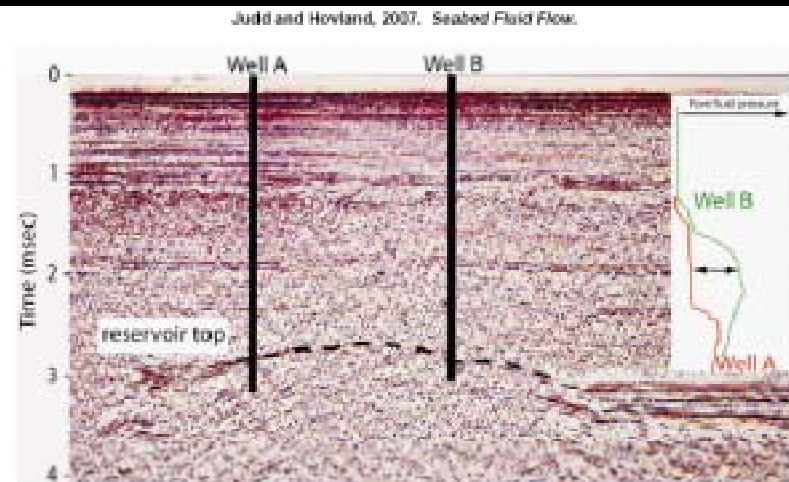
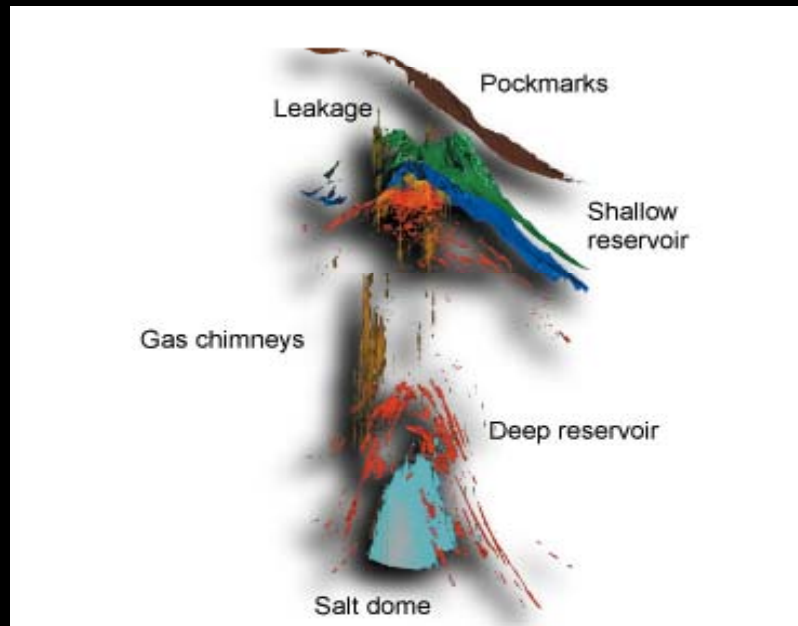
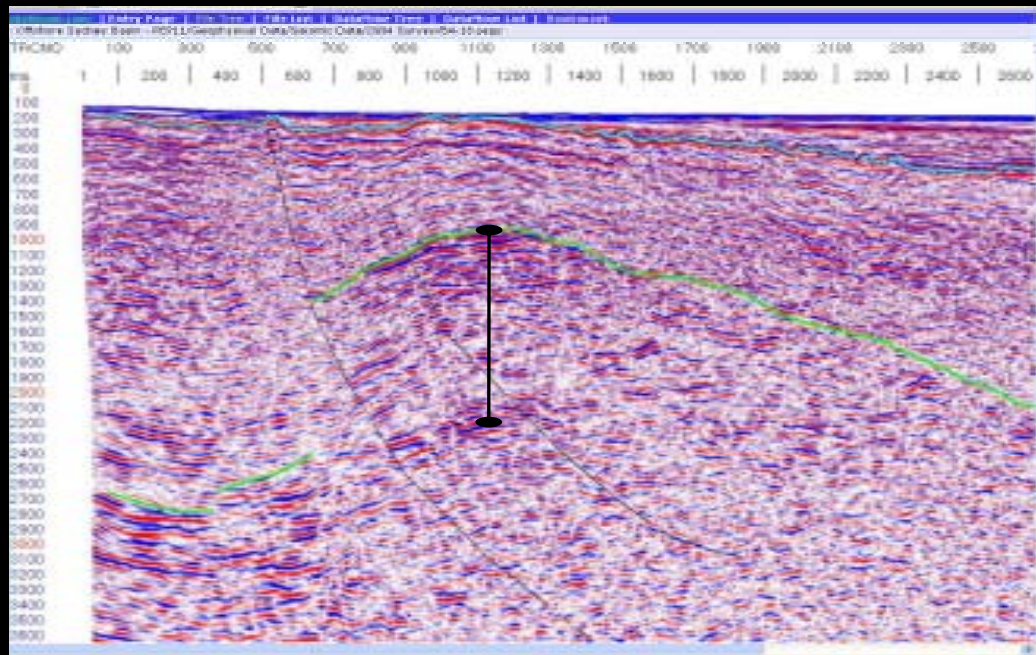
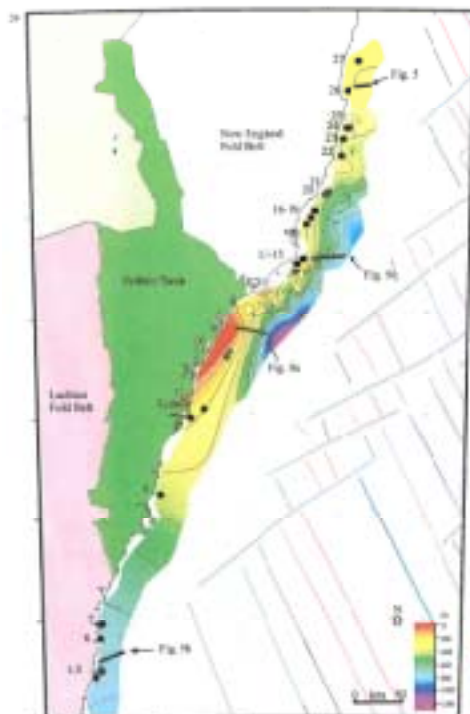


Figure 6.8: Seismic section across the Gullfaks South field (Norwegian North Sea) showing a gas cloud (a zone in which the acoustic layering is obscured by the presence of gas) above the petroleum reservoir. Well A lies outside the gas cloud, Well B passes through it. In Well B mud gas readings were found to be much higher, there were more higher hydrocarbon gas components (C2 to C5), more gas shows, and higher pore fluid pressure (see inset) than Well A, outside the chimney; there was a 10.2 MPa pore fluid pressure difference between the two wells at the depth indicated by the two-headed arrow on the inset diagram. N.B. The vertical scale of the seismic section (in seconds, two way time), does not match the vertical scale (depth in km) of the pressure diagram. [Courtesy of Helge Leseth, Statoil]

- Apparent gas reservoir at intermediate (1.0 – 2.2 sec twt) depths
- Trap charge migration is not imaged
- Evidence of more active seepage at both flanks



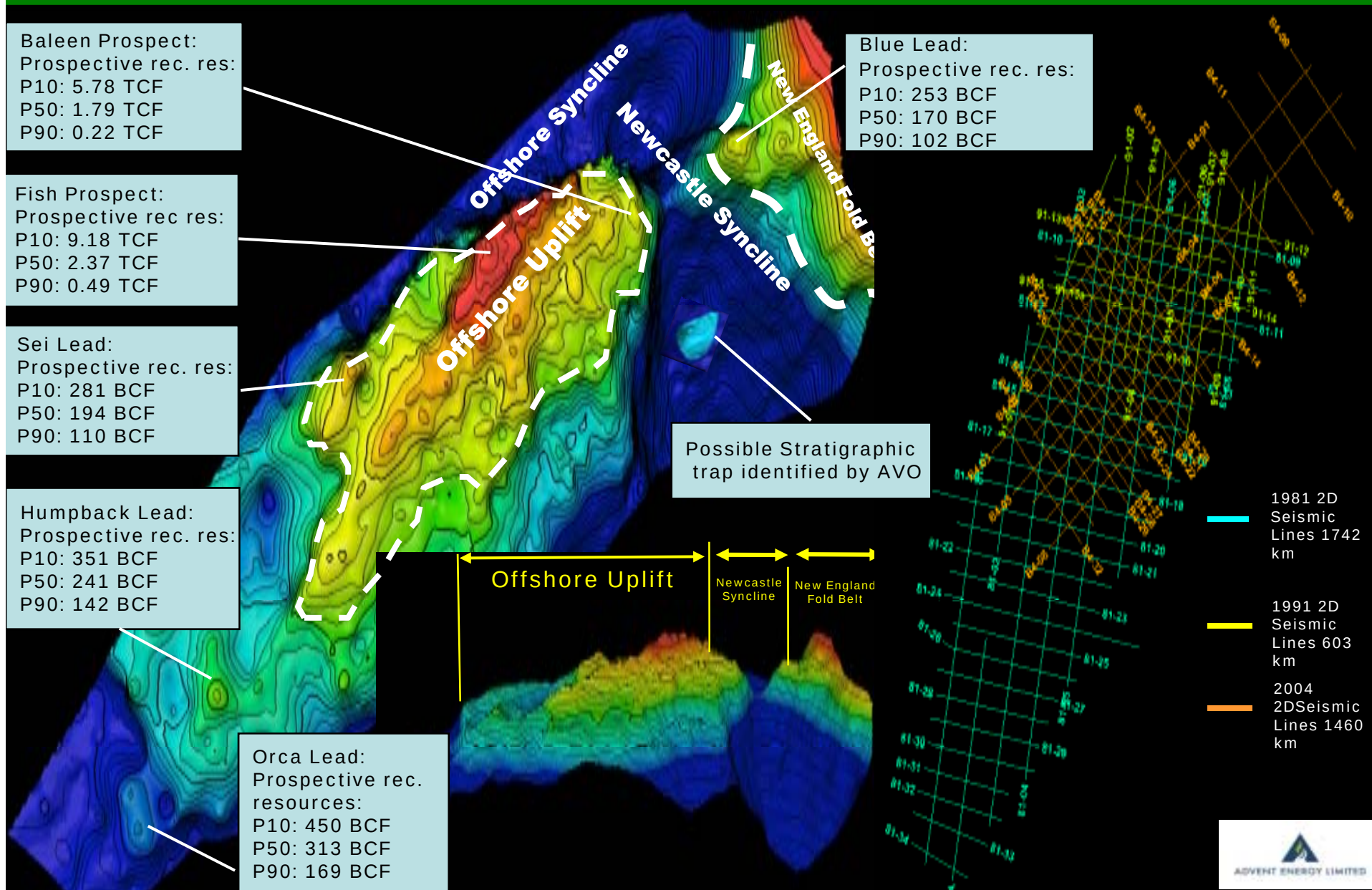


Source: Sayers et al, Geoscience Australia

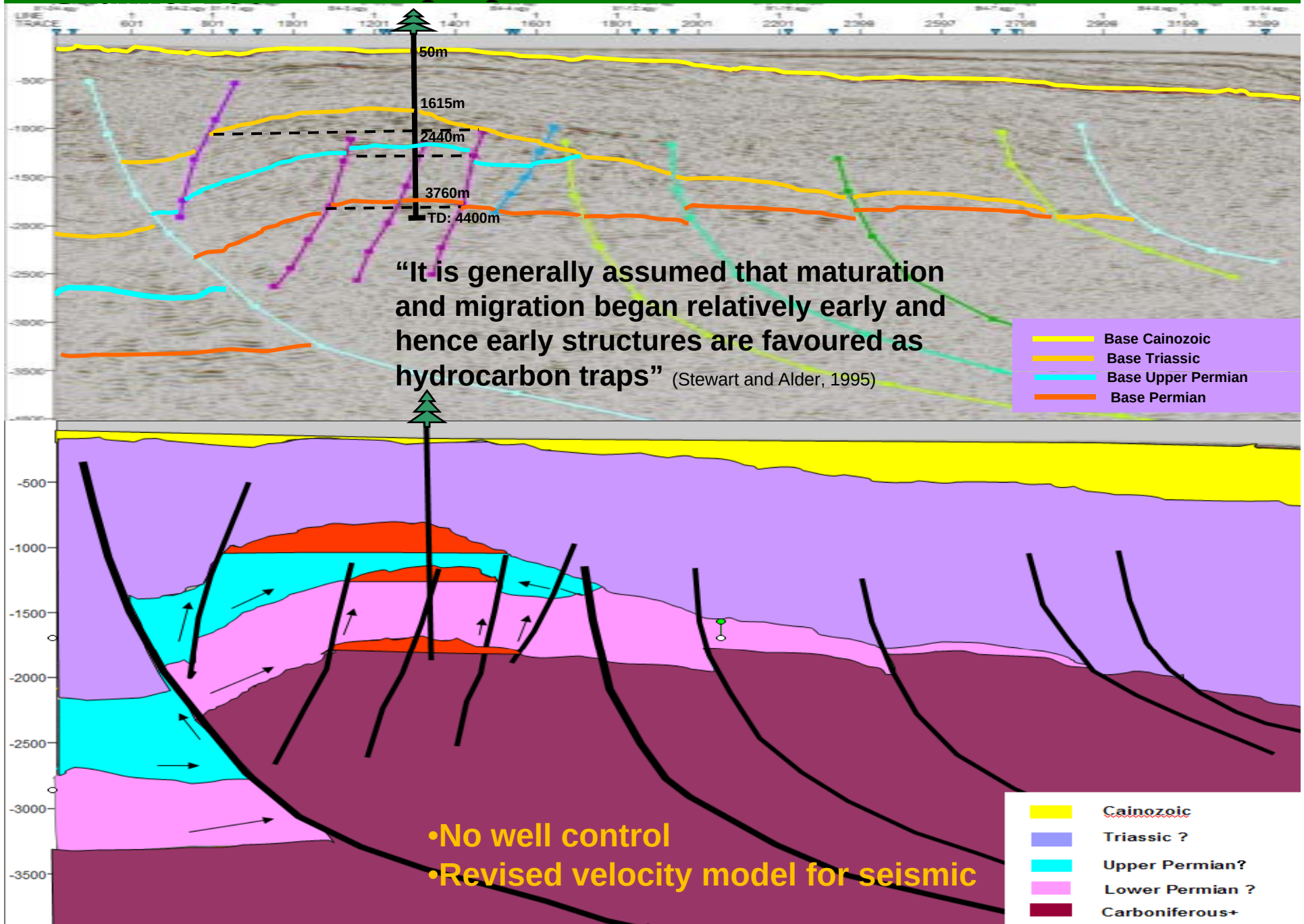
Bathymetry data courtesy Kriton Glenn-Geoscience Australia, onshore well data courtesy NSW DPI

Offshore Sydney Basin:

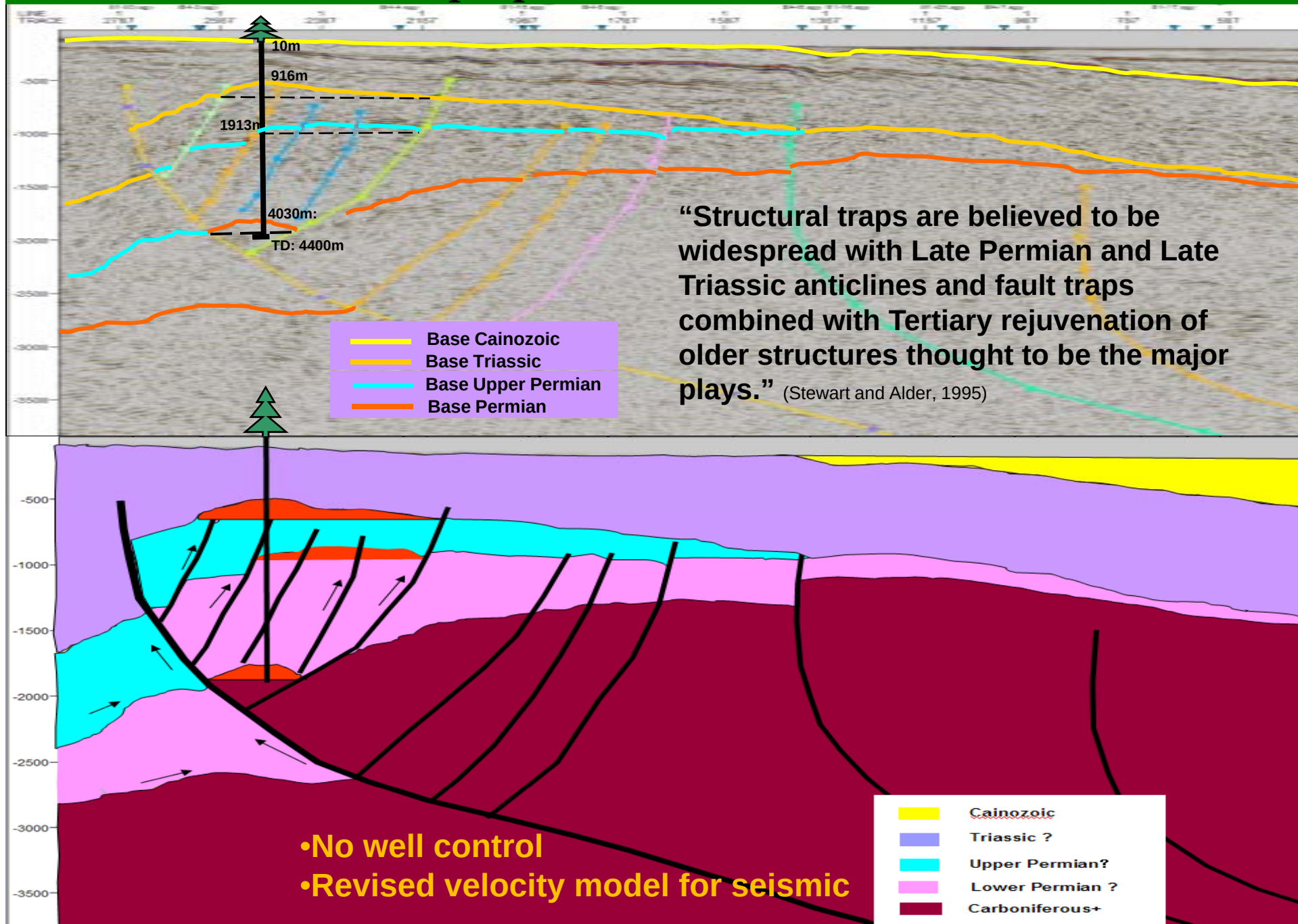
Horizon E Structure Frame Indicating Huge Offshore Anticline



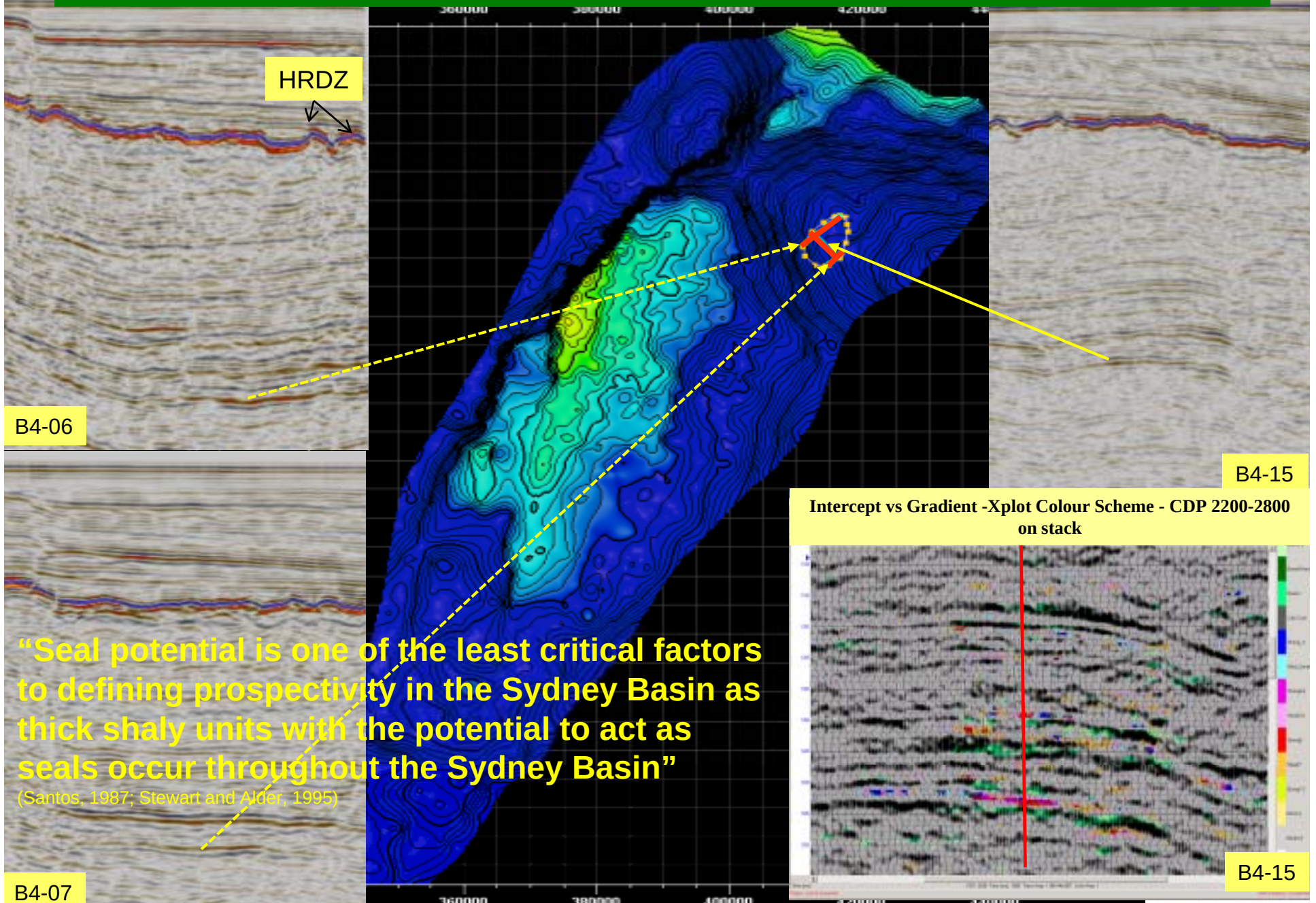
Profile of proposed well Baleen # 1 [seismic line B4-19]



Profile of proposed well Fish # 1 [seismic line B4-28]

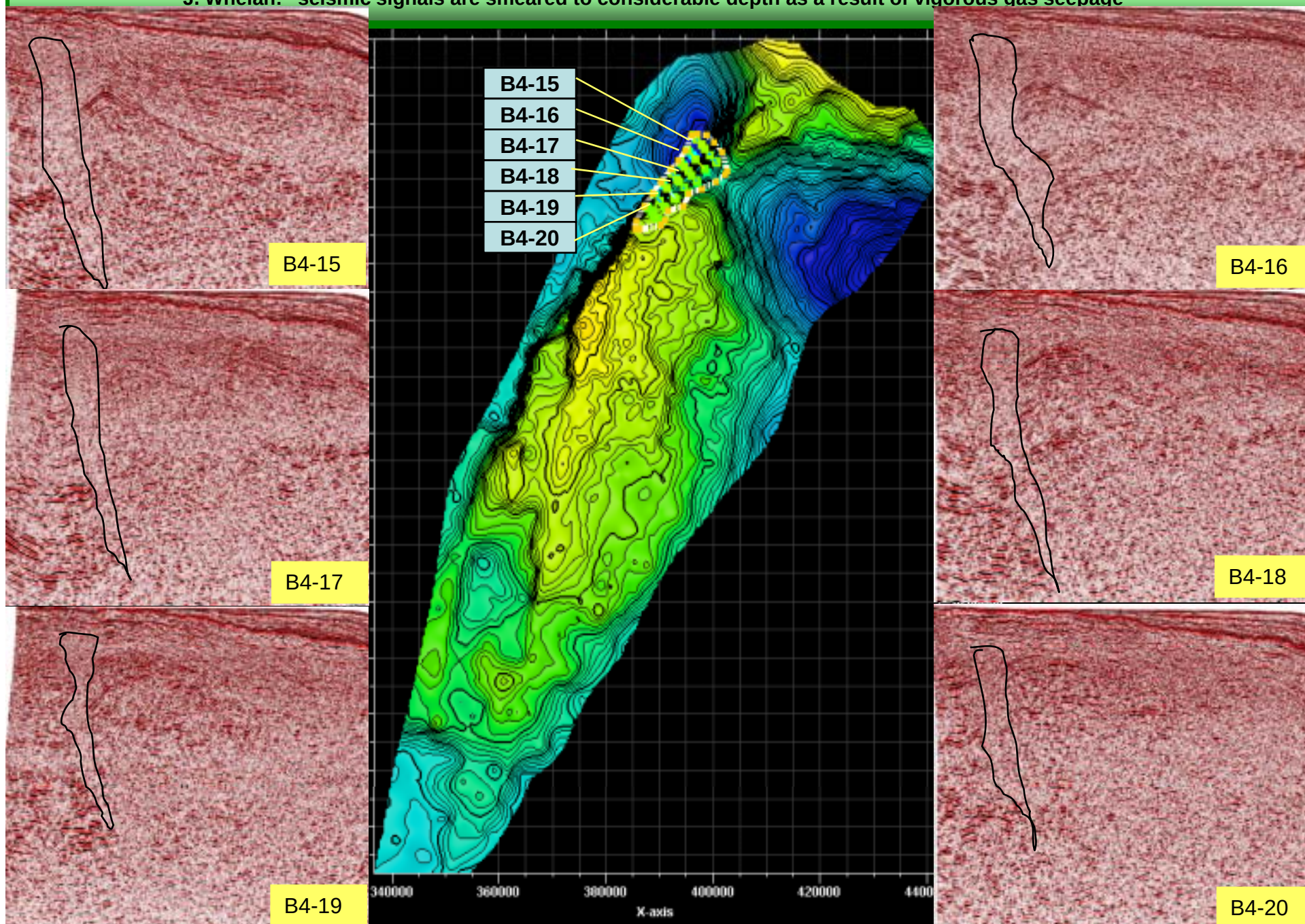


Possible AVO

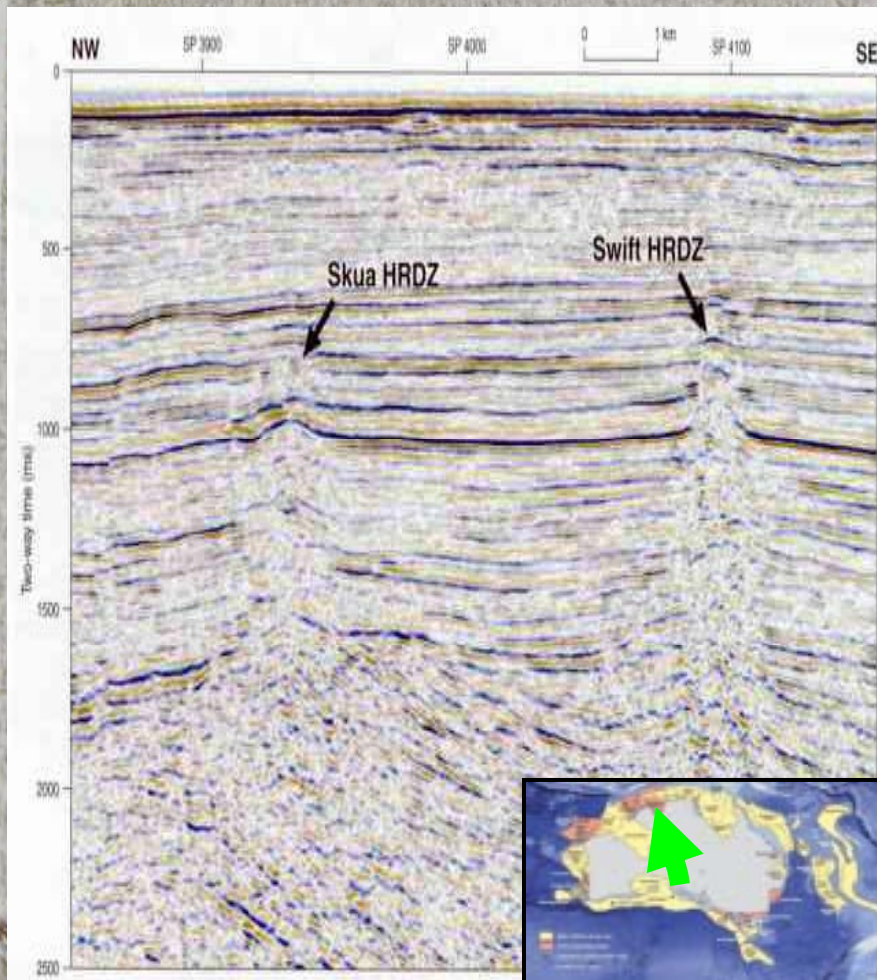
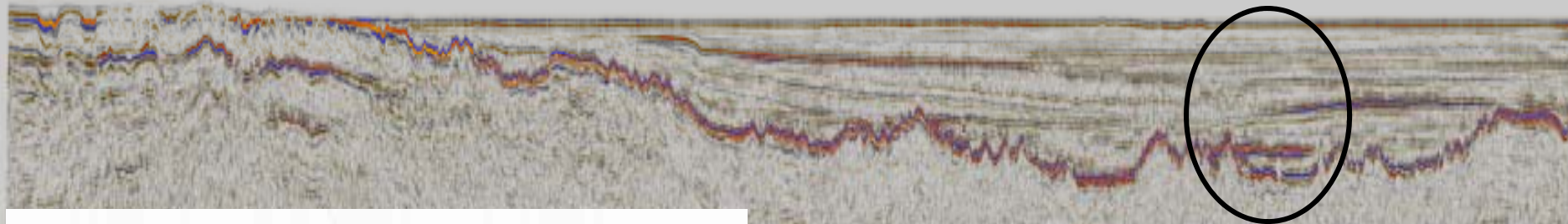


Distribution of Gas Chimney

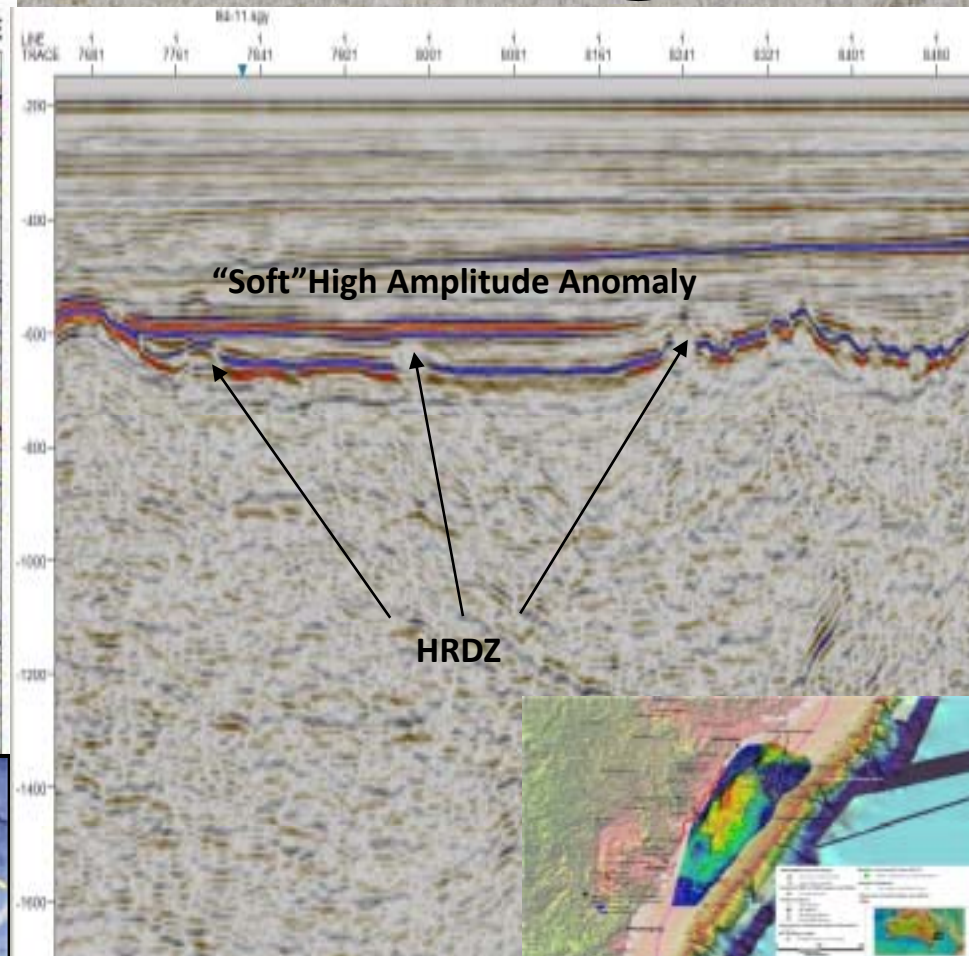
J. Whelan: "seismic signals are smeared to considerable depth as a result of vigorous gas seepage"



HRDZ comparison between Line B4-05 and Bonaparte Basin

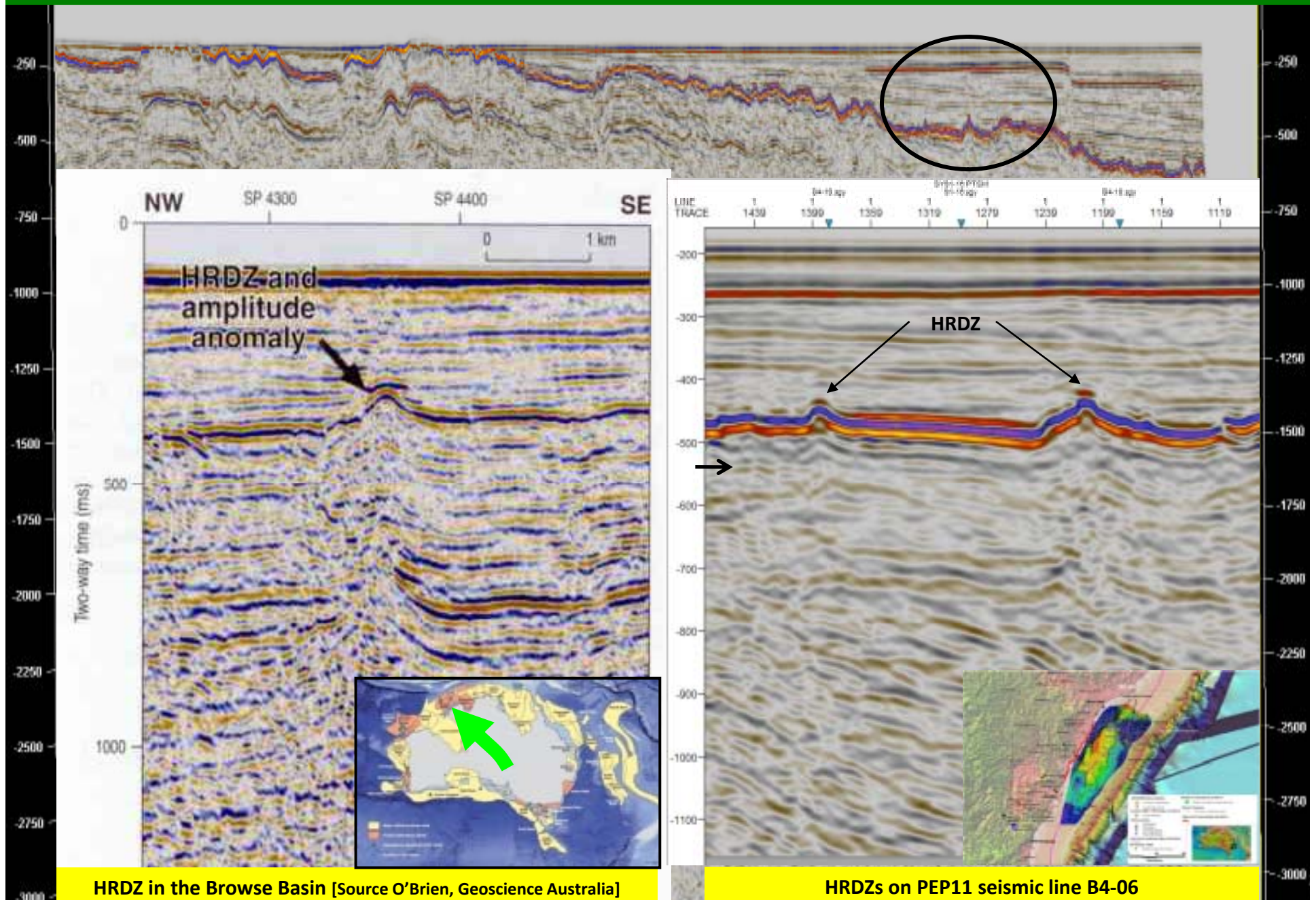


HRDZs over the Skua and Swift fields, Bonaparte Basin
[Source O'Brien, Geoscience Australia]

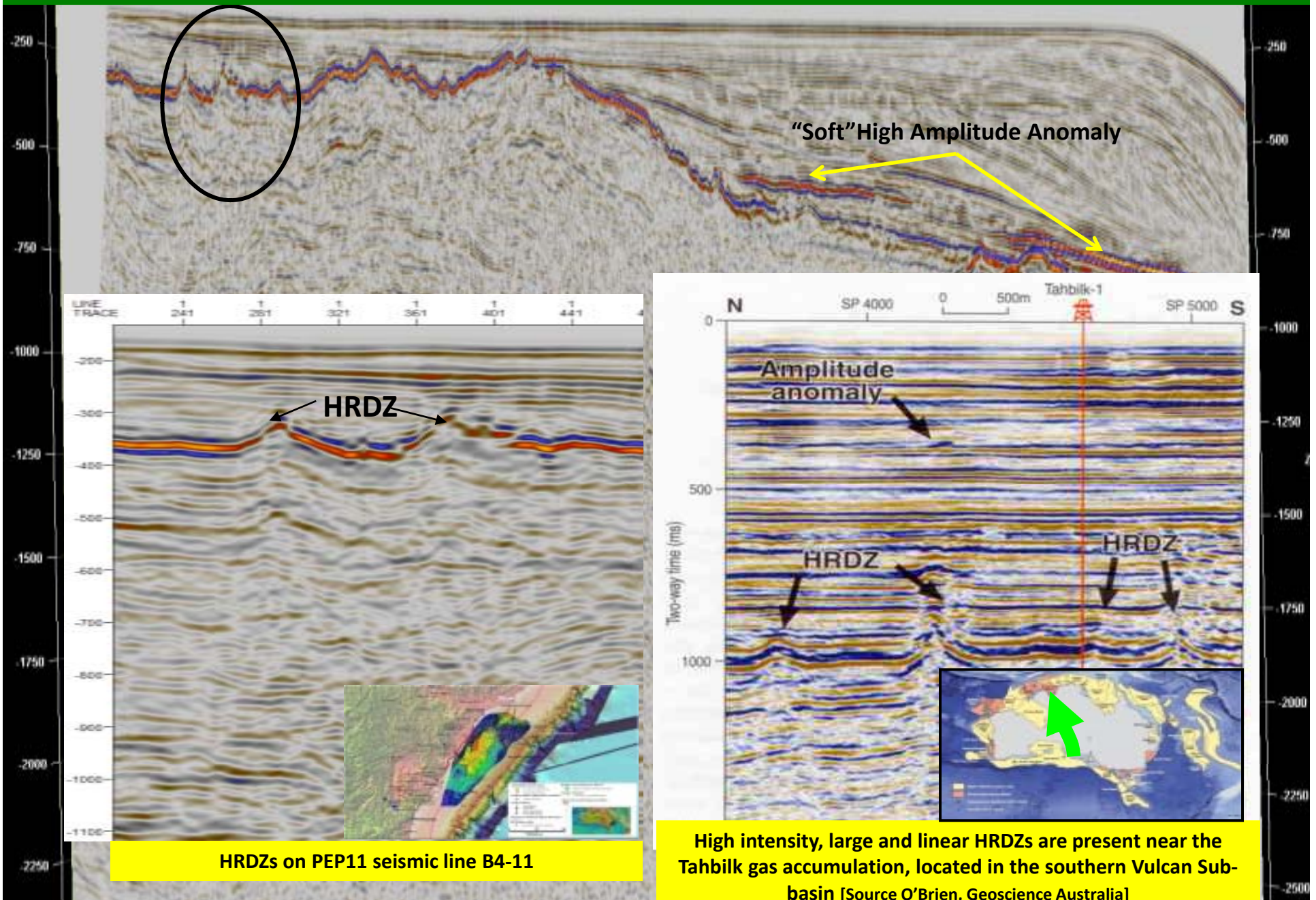


HRDZs on PEP11 seismic line B4-05

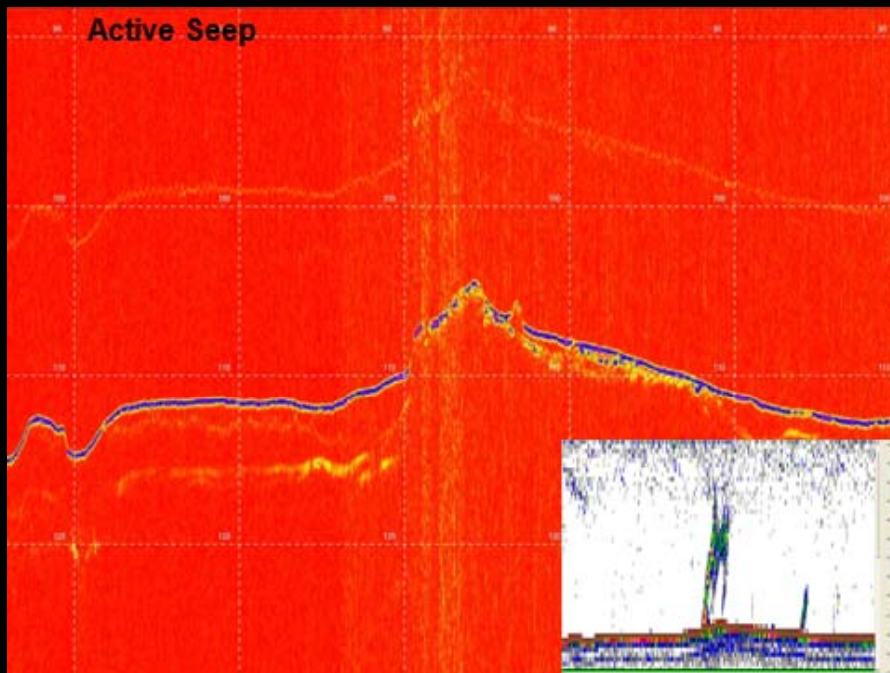
HRDZ comparison between Line B4-06 and Browse Basin



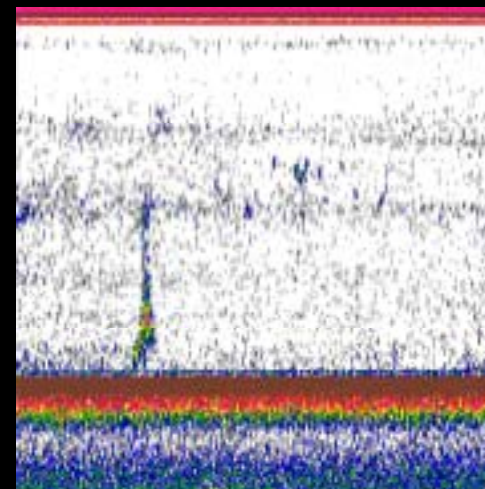
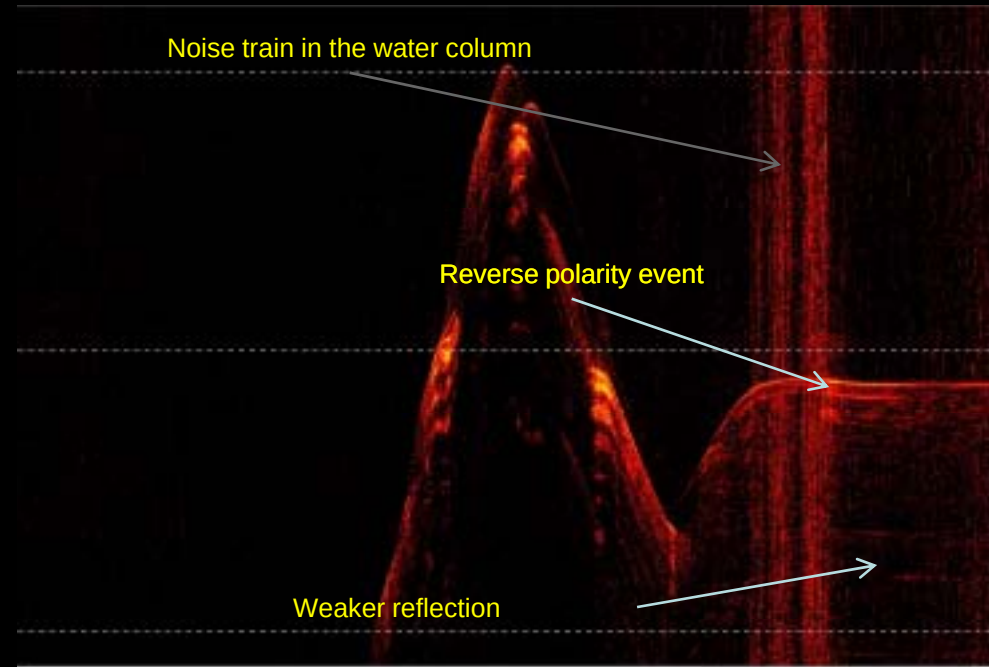
HRDZ comparison between Line B4-11 and Vulcan Sub-basin



"A recent review of more than 850 wildcat wells – all drilled after geochemical surveys finds that 79% of wells drilled in positive anomalies resulted in commercial oil and gas discoveries" D. Schumacher



Cornea seep, over Cornea oil/gas field, Timor Sea



Gas in water column and shallow sediments identified in Sub-Bottom Profiles by Fred Kroh from SS10/2006 survey

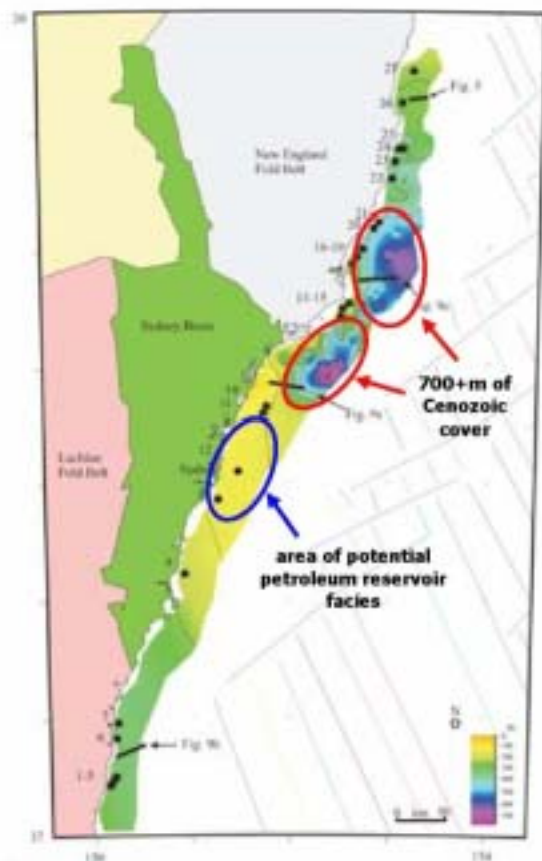
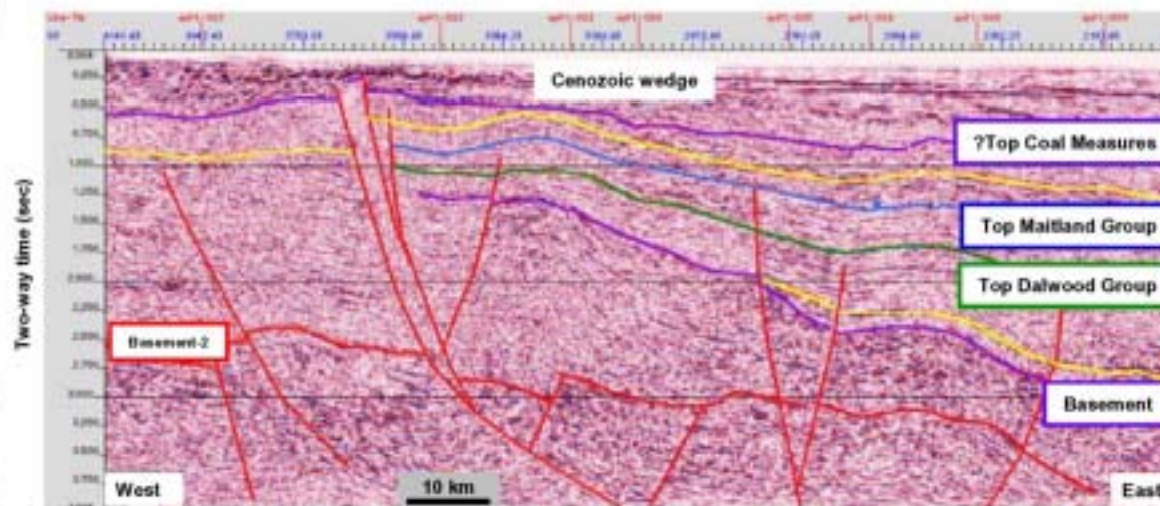


Figure 84 (above):
Isopach map of the Cenozoic cover in the Sydney Basin
(from Sayers et al., 2004)

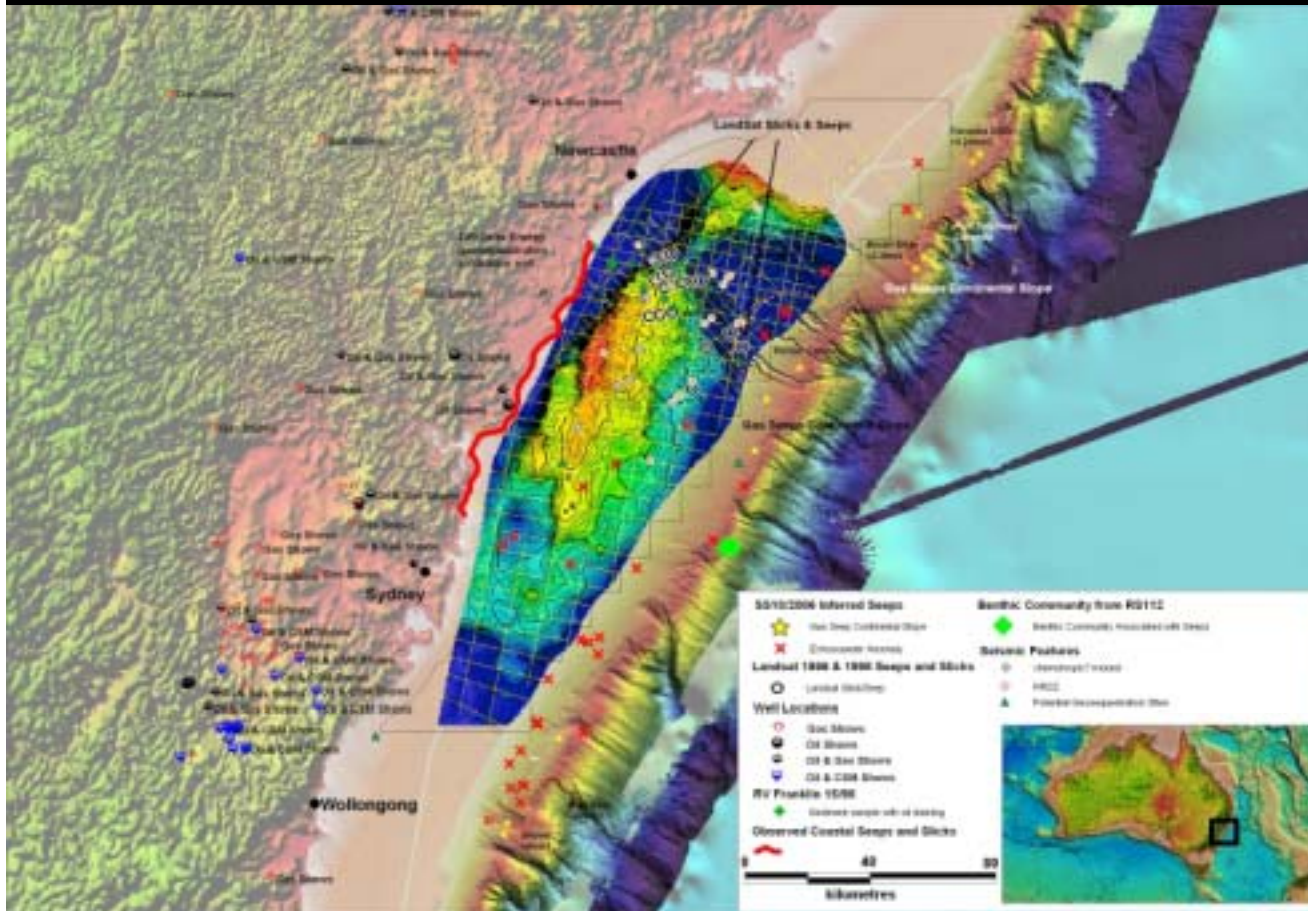
Figure 85 (right):
Interpreted seismic line 91-014 across the northern
offshore Sydney Basin. The line location is shown on the
adjacent map, along with the East Maitland-1 well and the
Hunter Valley Dome structural domain (red shading).



“Arditto (2003) argues that the central offshore region of Sydney Basin (southern part of PEP-11) is well positioned to contain clean, quartz-rich, fluvial to nearshore marine reservoir facies within the Late Permian Coal Measures. If adequate reservoirs exist, these facies are also well positioned to receive hydrocarbons from the adjacent coal and carbonaceous mudstone source rocks (Arditto, 2003)”

Analysis of Gas from Offshore Sydney Basin

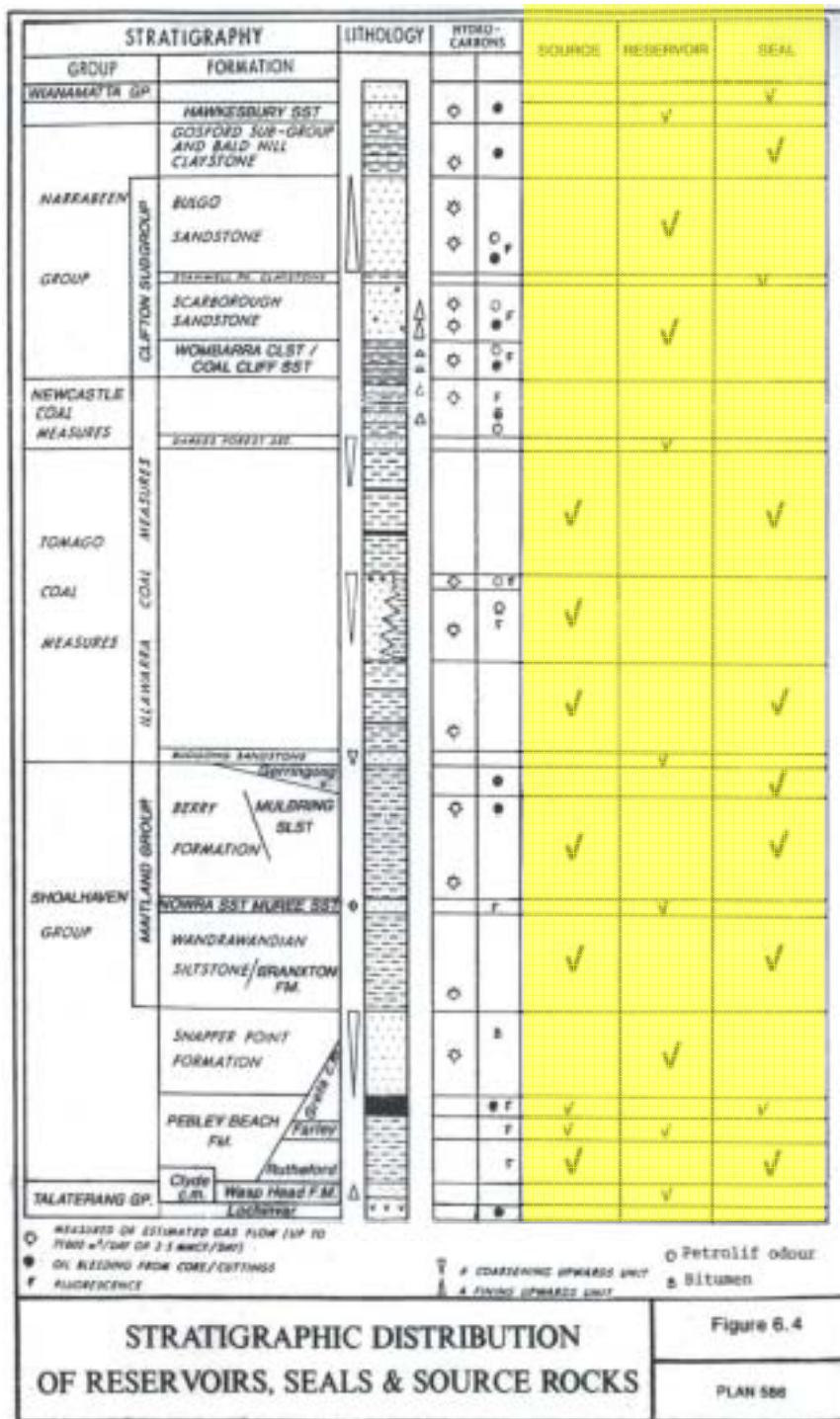
Repeated Hydrocarbon seep samples show a thermogenic source
- Liquids component indicated -



Hydrocarbon Seep Gas Analysis:

•Methane	90.69%
•Oxygen	1.58%
•Carbon Dioxide	4.12%
•Nitrogen	3.7%

“The main source kitchen areas are in the deeper parts of the Lake Macquarie Trough, Macdonald Trough, Offshore Syncline, and Newcastle Syncline”
(Santos, 1987; Alder et al., 1998)



- **Source Rocks** : Late Permian Coal Measures, mainly Greta and Tomago groups ;
- **Reservoir Rocks** : Fluvial Sandstone in Permian and Triassic
- **Seals** : Siltstone in Wandrabadian and Branxton group
- **Onshore**: 8 wells - oil shows & 16 – oil + gas shows

NSW Dept of Mineral Resources:

“41% wells flowed gas on test”

“The Sydney Basin contains an active petroleum system”

“Potential source and seal sequences occur extensively...”

“Reservoir potential should increase to the east, in the offshore”

“Early Permian sands are likely to / have good initial primary porosity and permeability.”

Offshore Sydney Basin : PEP 11 Summary

- NSW/PEP 11 covers 8100 sq km, 20 km from Australia's largest energy market, excellent infrastructure
- Permit Prospective Recoverable Resources estimated at up to 16.3 Tcf
- Excellent analogies with world class producing fields
- Active thermogenic hydrocarbon system demonstrated offshore
- Possible gas/condensate-charged Permian reservoirs / excellent potential for the discovery of gas and oil
- Prospective resources and proximity to infrastructure infer potential for LNG
- Advent – right to earn 85%; JV partner Bounty Oil & Gas reducing from 75% to 15%
- Robust Economics: $NPV_{10} > \text{A\$12 billion}$ potential
- Rig negotiations progressing, environmental approvals and drilling engineering processes underway





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- Jim Dirstein - -Total Depth - Principal Geophysical Consultant PTEM survey
- Fred Kroh –Formerly Project Leader of Geophysical Processing and Data Access Project - Geoscience Australia
- Tim Berge –Geophysical Consultant -
- Deet Schumacher -Terralliance
- Dan Orange
- Fred Aminzadeh
- David Connolly
- Michael Abrams
- Professor Ron Boyd –Newcastle University
- Andrew Mayo –Macquarie Oil –
- Kriton Glenn –Geoscience Australia
- Ben Clennel , Asrar Talukder and team (CSIRO Subsurface Prediction and Description)
- Geoff O'Brien –Formerly Geoscience Australia
- Ding Gui Ming –Principal Geological Consultant
- Associate Professor Jock Keene –Sydney University
- Kevin Ruming - School of Environmental and Life Sciences University of Newcastle
- BOS
- Oil Hunters
- Bounty Oil
- RPS
- BGP
- John Cant
- Allan Williams -NPA
- Mike Rego – Aminex
- Tom Fontaine
- Fugro
- Geoscience Australia
- Crown Minerals NZ
- Kieth Woolard
- David Orth
- David Remus

Publications

- AAPG Memoirs "Hydrocarbon migration and its Near surface Migration"
- Judd A and Hovland M "Seabed Fluid Flow"
- Whelan J Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution "Dynamic gas driven petroleum systems" and Whelan J et al "Surface & subsurface manifestations of gas movement through a N-S transect of the Gulf of Mexico"
- Government of NSW "New South Wales Petroleum Potential"
- NSW Department of Mineral Resources
- Alder et al "Prospectivity of the Offshore Sydney Basin –A New Perspective"
- Frog Tech Pty Ltd
- Aftenblad et Multimedia
- The European Commission "The Deep Sea Frontier"
- Aminzadeh, F., de Groot, P., Berge, T. et al "Determining Migration Pathway from seismically derived Gas"
- Geoscience Australia –Patchett.A and Langford. R."New South Wales –Deep Saline Aquifer Storage Potential"
- Geoscience Australia Glenn. K "Revealing the continental Shelf off New South Wales"
- Aminzadeh F Connolly D and Ligtenberg H "Hydrocarbon Phase detection and other applications of Chimney Technology"
- Dietmar "Deet" Schumacher, Surface geochemical exploration for oil and gas: New life for an old technology Geo-Microbial Technologies, Ochelata, Oklahoma, U.S. The Leading Edge
- Michael A. Abrams "Significance of hydrocarbon seepage relative to petroleum generation and entrapment" Marine & Petroleum Geology
- AAPG Conference Geoffrey W O'Brien, Andrew Barrett, and Megan Lech ."Integrating 3D Seismic data and multiple, independent remote sensing technologies to constrain near-surface Hydrocarbon Migration and Seepage Rates and Leakage Mechanisms on the North-western Australian Margin"
- Journal of Geophysical Research, The world's most spectacular marine hydrocarbon seeps (Coal Oil Point, Santa Barbara Channel, California):
- Marine & Petroleum Geology N. Rollet, GA Logan, JM Kennard, PE O'Brien, AT Jones, M Sexton Characterisation and correlation of active hydrocarbon seepage using geophysical data sets: An example from the tropical, carbonate Yampi Shelf, Northwest Australia
- Daniel Lewis Orange The implications of Hydrocarbon seepage, gas migration and fluid overpressures to frontier exploration and geohazards
- Dietmar Schumacher AAPG Hedberg Conference Near Surface Hydrocarbon Migration; Mechanisms and seepage rates The Dynamic Nature of Hydrocarbon Microseepage: An Overview
- O'Brien et al "Yampi Shelf Browns Basin –Northwest Shelf "
- Cowley R & O'Brien "Identification and interpretation of leaking hydrocarbons using seismic data"
- Kroh F Reprocessing shows AVO potential for petroleum exploration Geoscience Australia



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