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THE PETROLEUM PROSPECTIVITY OF

EPP T/31P

**STRAHAN SUB-BASIN
SORELL BASIN**

TASMANIA

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The west coast of Tasmania is fringed by the Cretaceous - Tertiary aged Sorell Basin. This virtually undrilled basin appears, from scientific research, empirical evidence and the very limited drilling, to be highly prospective for oil generation and entrapment.

The basin is fundamentally an analogue of the prolific Gippsland Basin overlying the productive Otway Basin in that channeled Lower Tertiary section unconformably overlies tilted and rotated Cretaceous fault blocks. Some of these faults appear to have significant growth.

The Sorell Basin is essentially an extension of the Otway Basin from which it is separated by a basement high south of King Island. It is composed of four sub-basins namely, from north to south, King Island, Sandy Cape, Strahan and Port Davey. Exploration permit T/31P which is held in equal part by Roma Petroleum NL (Roma) and Guinness Peat plc (Guinness Peat) covers the near shore portion of the Strahan Sub-basin. Whilst the deeper section of the basin, a perceived hydrocarbon generating kitchen, is sited just west of T/31P it is ideally located to have charged structural and stratigraphic traps within the permit as it is connected by short, steep, direct migration pathways to the block. Mature source rocks are also likely to be present within T/31P.

The only exploration well drilled within the Strahan Sub-basin is not a valid crestal test. However it should be noted that the well penetrated more than 300 metres of very rich, early mature, marine source rocks. These source rocks would be well into the oil generating window in the basin depocentre. Of even more significance, free oil was recovered from cuttings and sidewall cores taken from this well.

Scientific research has established that the sea floor sediments in the Strahan Sub-basin have very high, by world standards, hydrocarbon anomalies. Furthermore these anomalies indicate the presence of wet gas and oil. Stranded oil of a marine and Australian origin has been recorded along Tasmania's West Coast.

All the major prerequisites for the generation and entrapment of oil, in commercial quantities, appear to be present in the Strahan Sub-basin namely:

- rich, mature marine source rocks;
- high porosity and high permeability clastic reservoirs;
- sealing units of both a regional and intraformational nature;
- large structural traps;
- a huge area of favourable stratigraphic trapping geometry; and
- short, steep, unhindered migration pathways from the hydrocarbon generative kitchens to the areas of trapping geometry.

2.0 INTRODUCTION

The Sorell Basin, a large passive margin sedimentary basin located off the west coast of Tasmania, was initiated by rifting in the Late Jurassic when the Australian and Antarctic Plates began to separate. This rifting exhibited a sinistral, trans-extensional component and resulted in the formation of a number of deep, generally fault bound, structural depocentres each of which contains a considerable thickness of Cretaceous and Tertiary section. Some of these depocentres are located beneath the Tasmanian continental shelf whilst others are located beneath and down the continental slope.

The Strahan Sub-basin, in particular, has access to a vast area of thick, mature Cretaceous-Tertiary marine source rocks. The area is virtually unexplored. There is overwhelming scientific and empirical evidence of the presence of hydrocarbon generation in the Strahan Sub-basin.

Very little systematic exploration has been conducted in the Strahan Sub-basin. The Esso Australia Limited and Broken Hill Proprietary Pty Ltd consortium (Esso-BHP) acquired regional seismic data and drilled several wells off the West Coast of Tasmania in the late 1960's following their widespread exploration programs in the sedimentary basins of south-eastern Australia. That program resulted in the major discoveries of the prolific Gippsland Basin of Victoria. The location of which is shown on Figure 1.

The most recent well, Cape Sorell 1, drilled off the West Coast of Tasmania is the only well located in the Strahan Sub-basin. It encountered an extensive interval of approximately 300m of very rich, early mature, source rocks but more importantly free oil was recovered from cuttings and sidewall cores. This well is not crestal. Recent mapping indicated that it is many kilometres from the crest of structural closure. The Cape Sorell 1 well was drilled by Amoco Australia Petroleum Company Limited (Amoco) in 1982. It is not a valid nor definitive test.

The most recent exploration conducted in the Strahan Sub-basin in the area of T/31P was that undertaken by Maxus Energy Corporation of Dallas (Maxus). They did extensive studies and reprocessed 1981 vintage seismic data previously acquired by Amoco as well acquiring a new seismic survey in 1990. Mapping of the seismic data from this survey identified three structural prospects of considerable size. The permit was then acquired by Roma and Guinness Peat in 1999, in equal part. Roma has completed a thorough and exhaustive re-evaluation of this highly prospective block.

3.0 GEOLOGY

The geology of the Strahan Sub-basin of the Sorell Basin appears to be conducive to the generation, entrapment and retention of hydrocarbons. The basin is sited at the southeast end of the Southern Break-Up Margin of Australia, a region which is productive of both oil and gas.

3.1 Geological Setting

The Strahan Sub-basin is located off the West Coast of Tasmania. The Sub-basin lies immediately west of Macquarie Harbour and the township of Strahan and its location is shown on Figure 2. The Sorell Basin is located on the passive rift margin of Southern Australia which was initiated in Late Jurassic - Early Cretaceous time when Australia and Antarctica began to separate. This rifting, which is believed to have a left sinistral trans-extensional component, resulted in the formation of four, generally fault bound, depocentres which contain thick piles of Cretaceous - Tertiary marine sediments.

The Strahan Sub-basin is bound to the east by metasediments of the Tasmanian mainland, to the west by the continent - ocean boundary. The Strahan Sub-basin is separated from the neighbouring Sandy Cape sub-basin to the north by a large basement high. It is similarly separated from adjacent Port Davey Sub-basin to the south by another large basement high.

Extensive extensional faulting has resulted in many areally small but deep depocentres within these sub-basins and under the continental slope off West Tasmania. A vast area of thick Cretaceous-Tertiary section which is known to be mature for hydrocarbon generation, but remains untested, is present in the Strahan Sub-basin.

The Strahan Sub-basin was initiated by Late Jurassic - Early Cretaceous rifting which began the separation of the Australian and Antarctic Plates. This rifting exhibits a sinistral trans-extensional component and has resulted in the formation of a number of deep structural depocentres, which are generally fault bound and which contain extensive thicknesses of Cretaceous - Tertiary sedimentary rocks. The Strahan Sub-basin is a component of the Sorell Basin which is fundamentally a lateral equivalent of the Otway Basin to the north from which it is separated by a basement high south of King Island.

Further epeirogenic uplift occurred in the Middle Cretaceous which is evidenced by a prominent 'breakup' unconformity. Additional normal faulting, with a significant left lateral wrench component, continued through until the Middle Oligocene when separation of the Australian and Antarctic Plates occurred.

Additional uplift occurred in the Paleocene as evidenced by the extensive erosional channeling present, similar to the Marlin Channel of the prolific Gippsland Basin. The large scale compressive tectonics of the Middle Miocene which formed most of the productive structures in the Gippsland Basin to the north is also evident, but not as marked. Significant angular unconformities are also present in the Middle to Late Tertiary section indicating continued tectonics.

The many episodes of structuring is fortuitous as it indicates the presence of long standing traps which would be in place to capture migrating hydrocarbons throughout most of the sub-basin's history. It is believed the generation and migration of oil occurred quite late in the basin, hence the timing of trap formation is probably optimal.

As a result of the extensive rifting and episodes of normal faulting the Strahan Sub-basin has many self contained, deep structural lows and depocentres. The overall effect has been to produce, in the area of T/31P, a barred basin which probably has restricted the circulation of water and created an anoxic reducing environment. Such an environment is ideal for the preservation of rich, unoxidized marine source rocks.

3.1.2 Stratigraphy

The Strahan Sub-basin is essentially an analogue of the productive Lower Tertiary section of the Gippsland Basin overlying the hydrocarbon bearing Cretaceous Otway Basin section in that channeled Early Tertiary section overlies tilted Cretaceous aged rotated fault blocks. The stratigraphic nomenclature adopted for the Sorell Basin, and subsequently the Strahan Sub-basin, is that of the Otway Basin of South-west Victoria. A stratigraphic column is included as Figure 4.

The earliest sediments expected to be present are correlatives of the Early Cretaceous Otway Group. These are rift fill sediments of a fluvial-deltaic nature. This unit, which is known to have sourced the soon to be developed Minerva gas field in the offshore section of the Victorian sector of the Otway Basin, was not intersected in the proximal Cape Sorell 1 well.

This unit is unconformably overlain by Cenomanian to Maastrichtian aged marginal marine clastics of the Sherbrook Group, which also hosts hydrocarbons in the onshore sector of the Otway Basin in both Victoria and South Australia, as well as the offshore Minerva gas field.

The Sherbrook Group is in turn unconformably overlain by the shallow marine clastics of the Paleocene - Early Eocene aged Wangeripp Group which is broadly equivalent to the upper portion of the productive Latrobe Group of the Gippsland Basin. The Wangeripp Group is also heavily channeled in an analogous manner to the Latrobe Group. This unit is in turn unconformably overlain by the Eocene - Oligocene Nirranda Group which is composed of marls and sandstones. The youngest group, the Heytesbury Group, which is composed of shelfal marl and temperate carbonates, unconformably overlies the Nirranda Group.

3.2 Petroleum Geology

Many detailed studies indicate that the Strahan Sub-basin of the Sorell Basin contains rich marine source rocks which have generated oil (reference Armstrong et al 1983 and Amoco 1983.). It is known that three petroleum systems are active on the Southern Margin of Australia namely:

- Austral 1 With Early Cretaceous source rocks. This system is productive in the onshore Otway Basin of South Australia in particular, as well as offshore Victoria.

- Austral 2 With Late Cretaceous source rocks. This system is productive in the onshore sector of the Victorian sector of the Otway Basin.

- Austral 3 With Early Tertiary source rocks. This system is productive and prolific in the Gippsland Basin of Victoria.

There is also much empirical evidence to support the presence of oil in the Strahan Sub-basin. The most convincing evidence is the presence of live, free oil in the Cape Sorell 1 well. This oil was encountered in cuttings and in a sidewall core. Further evidence exists in the existence of stranded bitumens along the West Coast of Tasmania. These strandings which occur along the southern coast of Australia all belong to a single family of oils.

They are aromatic - asphaltic and are rich in sulphur, indicating a marine source rock origin. The perceived origin of these oils is Late Jurassic to Cretaceous marine shales deposited in an anoxic/sulphidic restricted environment. A recent study has indicated that these oils are identical to the oils generated by the Albian age shales of the Toolebuc Formation of the Great Artesian Basin. Hence an Australian origin rather than Indonesian source is responsible for these strandings, those on the west coast of Tasmania in particular. This is a very important determination as it highgrades the Strahan Sub-basin as a potential oil province.

Further empirical evidence is the occurrence of thermogenic hydrocarbons in cores taken from the sea floor on the continental shelf west of the Tasmanian coast. The yields, high by world standards, were highest in the Strahan Sub-basin. They indicate 'wet' gas generation and presumably oil.

3.2.1 Source Rocks And Maturity

The Sorell Basin, of which the Strahan Sub-basin is a component, is part of the major rifting which commenced in the Late Jurassic and Early Cretaceous and resulted in the separating of Australia from Antarctica.

The resulting grabens were the sites of the accumulation a thick pile of potentially very rich, restricted marine source rocks which are known to be in the early oil window at depths of approximately 3,000m in the Cape Sorell 1 well, a marginward location. These rocks are buried on an additional couple of thousand metres in a depocentre approximately 25 kms west of the above mentioned well. Sea floor cores above this depocentre have enormously high thermogenic hydrocarbon counts which indicates that 'wet' gas and presumably oil gas has been generated.

Various studies by Robertson Research and Amoco Production Research Company indicate the presence of very rich, oil prone, source rocks which are in the early oil maturation window at the Cape Sorell 1 location, a shallow proximal position on the edge of the Strahan Sub-basin. These studies indicate Total Organic Content (TOC) values well above average, with a mean value of 4%. Vitrinite Reflectance values (V_{RO}) are all in the early mature region for oil generation and range from 0.46% to 0.54%. Thermal Alteration index (TAI) and Spore Colouration Index (SCI) values are all consistent with the source rocks being in the early mature window. Oil rich lipinitic kerogens have been identified.

These studies indicate that very rich oil prone source rocks are present. These rocks could be expected to have passed through the peak oil generative window in the basin depocentre, west of Cape Sorell 1. Hence large volumes of oil should have been generated and then oil should have migrated eastward into robust structural traps located within T/31P. Additional information on source rocks is covered in Section 4.2, Geochemical Surveys.

3.2.2 Reservoirs

The presence of good reservoir intervals in the Lower Tertiary and Cretaceous section has been established at Cape Sorell 1. The presence of interbedded reflectors on the seismic data and the myriad of unconformities evident of the seismic sections point to the presence of alternating reservoirs and seals in the deeper untested Early Cretaceous section.

The Eocene/Paleocene section is particularly sandy with excellent quality reservoirs and with porosities up to 30%. Most sandstone units have porosities in the range of 20-30%. The sandstones and conglomerates below 3,000m in the Upper Cretaceous section in Cape Sorell 1 have lesser porosities. However this well was sited in a very proximal location and the sediments are quite poorly sorted and quite angular and have traveled little distance from the provenance, onshore Tasmania. Reservoir quality could be expected to improve with more sediment transport distance away from the 'Tasmanian Craton' which the previously mentioned well is sited quite near to.

In general, good quality reservoirs can be expected within the section, particularly the lower Tertiary and Late Cretaceous portions.

3.2.3 Seals

Good seals are known from the Lower Tertiary, a major target of the basin in the Cape Sorell 1 well. Potential sealing intervals are also recognized, within the Cretaceous section. It is reasonable to expect that with basinward progression that more finer grained sealing units would be present. Not enough hard data is available to predict the presence of or absence of sealing units within the Lower Cretaceous section, although interbedded seismic reflectors indicate changing lithologies, presumably sandstones and shales.

3.2.4 Migration Pathways

The final requirement for a hydrocarbon accumulation is the presence of a simple, steep, unhindered migration pathway for the hydrocarbons generated in the hydrocarbon kitchen to travel to the robust traps towards the basin margin. This requirement is met in T/31P to a very high degree.

4.0 PREVIOUS EXPLORATION

Hydrocarbon exploration off the West Coast of Tasmania began in 1968 following the Esso - BHP large scale southern basin exploration program which was directed at the Gippsland Basin of Victoria, the Otway Basin of Victoria and South Australia and the Bass Basin of Tasmania. Hydrocarbons have been discovered in all three basins with a world class province being brought in the Gippsland Basin. After success in the Gippsland Basin the consortium undertook a frontier drilling program in the Tasmanian Sector of the Otway Basin and what is now known as the King Island Sub-basin of the Sorell Basin. Since then the only serious exploration in the Strahan Sub-basin was that conducted by Amoco in the early 1980's and some later work conducted by Maxus in the early 1990's.

The area covered by T/31P has been included in previous permits held by:

- Esso Exploration and Production Australia Ltd;
- Amoco Australia Oil Company; and
- Maxus Energy Corporation.

4.1 Geophysical Surveys

Several geophysical surveys utilizing different methods have been conducted in the area of T/31P. Aeromagnetic surveys as well as gravity surveys have been acquired which are useful in outlining the basin architecture. Of particular interest are seismic surveys some of which have been of a commercial nature whilst several others have been conducted by academic institutions as part of the scientific study of the rifting off of the Australian Plate from the Antarctic Plate.

Most of the academic data has been studied by the exploration companies and is incorporated in their reports. This information is quite useful in the sparsely explored Strahan Sub-basin, particularly the deep water section. It is particularly useful in a determination, however rudimentary, of basin architecture and the location of the depocentres and potential hydrocarbon generating kitchens. Details of previous seismic surveys can be found in Conolly and Galloway (1995).

4.1.1 *Seismic Surveys*

Several seismic surveys, some with associated gravity and coring and geochemical sampling have been conducted in the area of T/31P off the West Coast of Tasmania. Some were regional in nature and extend along the entire coast line. The scientific surveys were conducted by the Bureau of Mineral Resources (BMR) and the Bundesanstalt für Geowissenschaft und Rohstoffe (BGR) of Germany.

4.2 Geochemical Surveys

The previously mentioned research studies have included many geochemical surveys. Several of these indicate that the sea water column and sea floor sediments have enormously high hydrocarbon concentrations.

The geochemical studies directed toward source rock analysis all indicate that the sub-basins off the West Coast of Tasmania both have the capacity to produce, and are currently generating, hydrocarbons. The most encouraging evidence was obtained from:

- 1 Traces of free oil in the Cape Sorell 1. Excellent source rocks were also recorded in the last 300m of this well in the Strahan Sub-basin in Paleocene and Late Cretaceous rocks below 3,000m. This indicates the source rocks are present and have been elevated to maturation levels.
- 2 The Total Organic Carbon content of samples from Cape Sorell 1 are very rich. The highest TOC from a sidewall core was 18.6% with an average value of 3.45% for 12 samples. The case for cuttings samples was similar, a maximum value of 8.2% with an average value of 4.42%.
- 3 Surface geochemical samples from the Strahan Sub-basin indicate the presence of thermogenic hydrocarbons.
- 4 Surface samples collected by the R V Sonne cruise a joint BMR-BGR investigation have gas yields and molecular composition indicating the presence of wet, thermogenic hydrocarbons. The highest values were obtained on the upper continental shelf some 25 kms southwest of Cape Sorell 1 near the Tetons Prospect in T/31P. The total C₂ - C₅ readings were high by world standards, more importantly the proportion of C₂ - C₅, indicating the presence of liquids, was also high.

The above summary is modified after Conolly and Galloway (1995) from "Hydrocarbon Prospectivity of the Offshore West Coast of Tasmania" (1995).

4.3 Drilling

Little drilling of either an exploration or stratigraphic nature has been conducted off the West Tasmanian coast in general and in the Strahan Sub-basin in particular. Several DSDP holes are sited off the West Coast of Tasmania.

4.3.1 Exploration Drilling

Just four exploration wells have been drilled off the West Coast of Tasmania. The first three by Esso in the 1970's and the most recent, Cape Sorell 1, by Amoco in 1982. Only one well, the later, is sited in the Strahan Sub-basin.

It is important to note that the Early Cretaceous Section, thought to be present due to strong seismic evidence, is untested in the Strahan Sub-basin and the Late Cretaceous Section is barely tested as the well reached total depth in the uppermost portion of this interval. Cape Sorell 1, due to a less than optimal seismic grid did not test the crest of the Early Tertiary structure, which has an erosional genesis. In summary a valid structural test is yet to be drilled in this sub-basin, which drains a vast area of thick Tertiary and Cretaceous section known to contain rich mature source rocks beneath the continental slope.

4.3.2 Stratigraphic Drilling

The fully cored stratigraphic hole, DSDP location 282, is sited within the block. The results of this scientific drilling is discussed in referenced papers. However it should be noted that this well encountered rich organic Eocene shales, acknowledged source rocks.

4.4 Seismic Interpretation

Three episodes of modern, post 1980 seismic mapping have been conducted in the area of T/31P, particularly the eastern section.

4.4.1 Previous Mapping

The eastern portion of what is now T/31P has been mapped in detail by two previous operators. The first Amoco acquired seismic data in 1981 and drilled the Cape Sorell 1 well in 1983, on this mapping.

The second operator Maxus acquired additional seismic data, reproduced the Amoco data and mapped the area in the early 1990's. This mapping identified three prospects, Braddon Point, Sloop Point and Trial Harbour as well as two significant leads.

4.4.2 Reinterpretation & Remapping

Roma Petroleum conducted a re-interpretation of the most modern, post 1990 seismic data within the area of T/31P. The modern seismic coverage of T/31P is shown on Enclosure 1. This attempted reinterpretation turned out to be very time consuming and difficult. This interpretation was conducted on paper sections of the 1990 Maxus Seismic Survey and not on a work station. The reprocessed Amoco data was unusable.

The interpretation proved to be extremely difficult for the following reasons:

- 1 The lack of a synthetic seismogram or time depth curve.
- 2 The myriad of interleaved unconformities present.
- 3 The ubiquitous rotated Cretaceous fault blocks.
- 4 The severely band limited data.
- 5 The presence of layered volcanics, near to basement.
- 6 The many out of plane reflections.

Seismic calibration was rudimentary with events correlated to horizons mapped by Maxus. Calibration will remain a problem until a deep well is drilled which penetrates the full sedimentary section and reaches basement. The check shot data and sonic log were not available to have a synthetic seismogram generated.

The following seven horizons were interpreted:

- 1 Acoustic Basement Seismic Marker (Blue horizon)
- 2 Upper Cretaceous Seismic Marker (?) (Brown horizon)
- 3 Near Top Sherbrook Group Seismic Marker (Purple horizon)
- 4 Lower Tertiary Seismic Marker (Yellow horizon)
- 5 Upper Tertiary Seismic Marker 1 (Orange horizon)
- 6 Upper Tertiary Seismic Marker 2 (Pink horizon)

A detailed hand contoured two way time map of the Upper Cretaceous (?) was prepared. This map which is included as Enclosure 2 shows several robust structures of significant size to warrant evaluation. More importantly it shows a huge stratigraphic trap with basement as the probable base and lateral seal and the Tertiary section as a top seal.

The output of mapping conducted by Roma Petroleum is different in detail to that of the previous operator, Maxus. It is difficult to ascertain which is more correct given the previously mentioned difficulties. However, reassuringly, Roma's mapping has also defined structures in a similar position to Maxus' Braddon Point and Sloop Point Prospects. More importantly Roma's mapping has confirmed a huge stratigraphic prospect co-incident with Maxus' Trial Harbour Prospect, also a stratigraphic prospect. Crestal seismic lines over all the prospects identified are attached as Enclosures 3-11. Enclosure 6 shows the location of the Cape Sorell 1 well.

Our mapping has high-lighted two additional prospects Tetons and Table Head to the west of Braddon Point. They are located more basinward and are better sited to entrap hydrocarbons migrating from the basin deep. Several other small structures and leads are also delineated.

All mapping conducted in T/31P indicates some structures, some of which are co-incident. However the detail does differ. To resolve this and to more efficiently explore this prospective basin the acquisition of a modern 3D seismic grid situated over the area of the previously acquired Amoco and Maxus grids is warranted. The benefits of such a grid are:

- 1 Modern, higher resolution seismic recording equipment can be used.
- 2 The optimal acquisition parameters can be used.
- 3 The attendant 3D migration will remove out of plane reflections.
- 4 The denser, lateral sampling will solve the problem of fault correlation.
- 5 The high resolution data will help with unconformity recognition and correlation across faults.

4.4.3 Prospects & Leads

Roma's mapping has identified five prospects of significant size to warrant consideration for evaluation by test drilling. A large, well sited lead, Ahrberg Bay, has also been recognized. These five prospects are listed below along with the potential reserves they could host. Representative reservoir parameters, used in these calculations are also tabled below.

4.4.4 Indicative Reserves

The potential reserves, both in place and recoverable, that the above five prospects could hold, using the listed and representative reservoir parameters, are detailed below.

Reservoir Parameters

Porosity	18%
Oil Saturation	75%
Formation Volume Factor	$^{1/}_{1.1}$
Net Effective Hydrocarbon Column	30m
Recovery Factor	0.3
Trap Geometry Factor	0.8

$$\begin{aligned}
 \text{In Place Oil/km}^2 &= 10^3 \times 10^3 \times 0.18 \times ^{1/}_{1.1} \times 0.8 \times .75 \times 0.3 \text{ m}^3/\text{km}^2 \\
 &= 2.9455 \times 10^6 \text{ m}^3/\text{km}^2 \\
 &= 2.9455 \times 6.29 \times 10^6 \text{ bbls/km}^2 \\
 &= 18.5269 \times 10^6 \text{ bbls/km}^2 \\
 &= \underline{\underline{18,530,000 \text{ bbls/km}^2}}
 \end{aligned}$$

Prospect	Aerial Extent (km ²)	Potential In Place Reserves (MMBBLs)	Potential Recoverable Reserves (MMBBLs)
Trial Harbor	56.50 km ²	1,046.95	314.08
Braddon Point	18.40 km ²	340.95	102.29
Sloop Point	15.20 km ²	281.66	84.50
Tetons	13.73 km ²	254.42	76.33
Table Head	7.54 km ²	139.72	41.92
Total Potential Recoverable Reserves			619.12 MMBBLs

From the above it is obvious that there exists the possibility of finding significant oil reserves in T/31P. Previous work by Maxus identified a similar total figure for Braddon Point, Trial Harbor and two levels in Sloop Point.

5.0 RECOMMENDATIONS

To more effectively explore T/31P it is recommended that a modern, high resolution 3D seismic grid over the near shore, shallow water section of the permit, essentially the area covered by the Maxus and Amoco grids be acquired. This should result in 'cleaner' data which will be more readily 'interpretable'.

Should a prospect be drilled prior to the recording of any 3D data it is recommended that the Braddon Point Prospect be selected. This is a very robust structure, controlled by major down to the basin normal faults, whilst not mapped, closure seems to persist from the Lower Tertiary through to presumed Lower Cretaceous section. This latter section is untested but correlative section in the adjacent Otway Basin is hydrocarbon productive. This section will be encountered at a similar depth as the Upper Cretaceous was in Cape Sorell 1, a more marginward well, due to gravity slumping and rotation of Cretaceous fault blocks. Erosional closure is also present in the Lower Tertiary section, the productive zones in the Gippsland Basin.

The smaller but more basinward Tetons Prospect should also be considered for evaluation as it is better sited to capture any hydrocarbons migrating out of the basin depocentre to the west. This prospect is sited on a structural nose adjacent to a steep gradient into the basin proper and the presumed hydrocarbon generating kitchens of the sub-basins located beneath the continental slope. This structure does not have as dense a seismic grid as does Braddon Point.

The huge Trial Harbor Prospect, a stratigraphic trap to the north, sits on basin's edge. This prospect is restricted to the Lower Tertiary and uppermost Upper Cretaceous. It and the more marginward Sloop Point structural prospect should be considered for drilling pending the results obtained at the Braddon Point and Tetons locations.

6.0 CONCLUSION

Roma's mapping, whilst restricted to one horizon, has confirmed Maxus' more detailed mapping with co-incident structures located at the Braddon Point, Sloop Point and Trial Harbor Prospects, of Maxus.

The Roma mapping has identified several other prospects, the Tetons and Table Head Prospects in particular. The former, in particular, is ideally located to evaluate whether a charge has come out of the basin deep.

Given the results of geochemical analysis of data from Cape Sorell 1 it would appear that the source rocks, in situ at these prospects, would be mature for oil generation.

To assess the oil prospectivity of this basin it is imperative that the Tetons and Braddon Point Prospects are evaluated by drilling. Whilst Braddon Point could be drilled now it is considered that it would be wise to acquire 3D seismic data to more accurately delineate these features to enable the optimal siting of test wells.

The Strahan Sub-basin appears to have all the requirements for oil generation and entrapment namely:

- Rich, mature, marine source rocks.
- Excellent intervals of sandstone reservoirs.
- Intervals of sealing units, both regional and intraformational.
- Direct, short, unhindered migration pathways from hydrocarbon generative kitchens to the potential traps.

A Basic Geochemical Evaluation of Eight Sidewall Cores From The Cape Sorell 1 Well Drilled in Australia, J P Armstrong, MM Alimi, J M Ode, K H King, Robertson Research (Singapore) Private Limited, Report No 1170, January 1983, (unpublished).

A Geohistory Analysis of the Cape Sorell 1 Well Drilled Offshore West Tasmania, G W Hughes, Robertson Research, Report 1019, (unpublished).

AGSO Cruise 147 Report - Tasman Rises Geological Cruise of Rig Seismic Stratigraphy, Tectonic History and Paleoclimate of the Offshore Tasmanian Region, N F Exon, J F Marshall, D C McCorkle, M Alcock, G C H Chaproniere, R Connell, S J Dutton, M Elmes, C Findlay, L Robertson, N Roller, C Samson, S Shafik and G P Whitmore, AGSO, Record 1995/56.

Block T/24P - West Tasmania Australia An Exploration Opportunity, Maxus Energy Corporation 1993, (unpublished).

Cape Sorell No 1 Drilling Prognosis, Amoco Australia Petroleum Company, April 1982.

Cape Sorell No 1 Geological Completion Report Exploration Permit T-12-P Offshore West Tasmania Australia, Amoco Australia Petroleum, Tasmania, Australia, October 1982, (unpublished).

Cape Sorell Strahan Sub-basin West Tasmania, Maxus Energy Corporation (unpublished).

Deep Water Otway Basin: A New Assessment of the Tectonics and Hydrocarbon Prospectivity, A M G Moore, H M J Stagg and M S Novick, APPEA Journal Vol 40 2000.

Hydrocarbon Prospectivity of the Offshore West Coast of Tasmania, J Conolly and M J Galloway, Mineral Resources Tasmania, Record 1995/04.

Review of Biostratigraphic Data From Cape Sorell 1 Sorell Basin, Alan D Partridge, Report for Roma Petroleum NL, December 1999, (unpublished).

Seismic Stratigraphic Study of the T-12-P permit Area Offshore West Tasmania Australia, Amoco Australia Petroleum Company, August 1981 (unpublished).

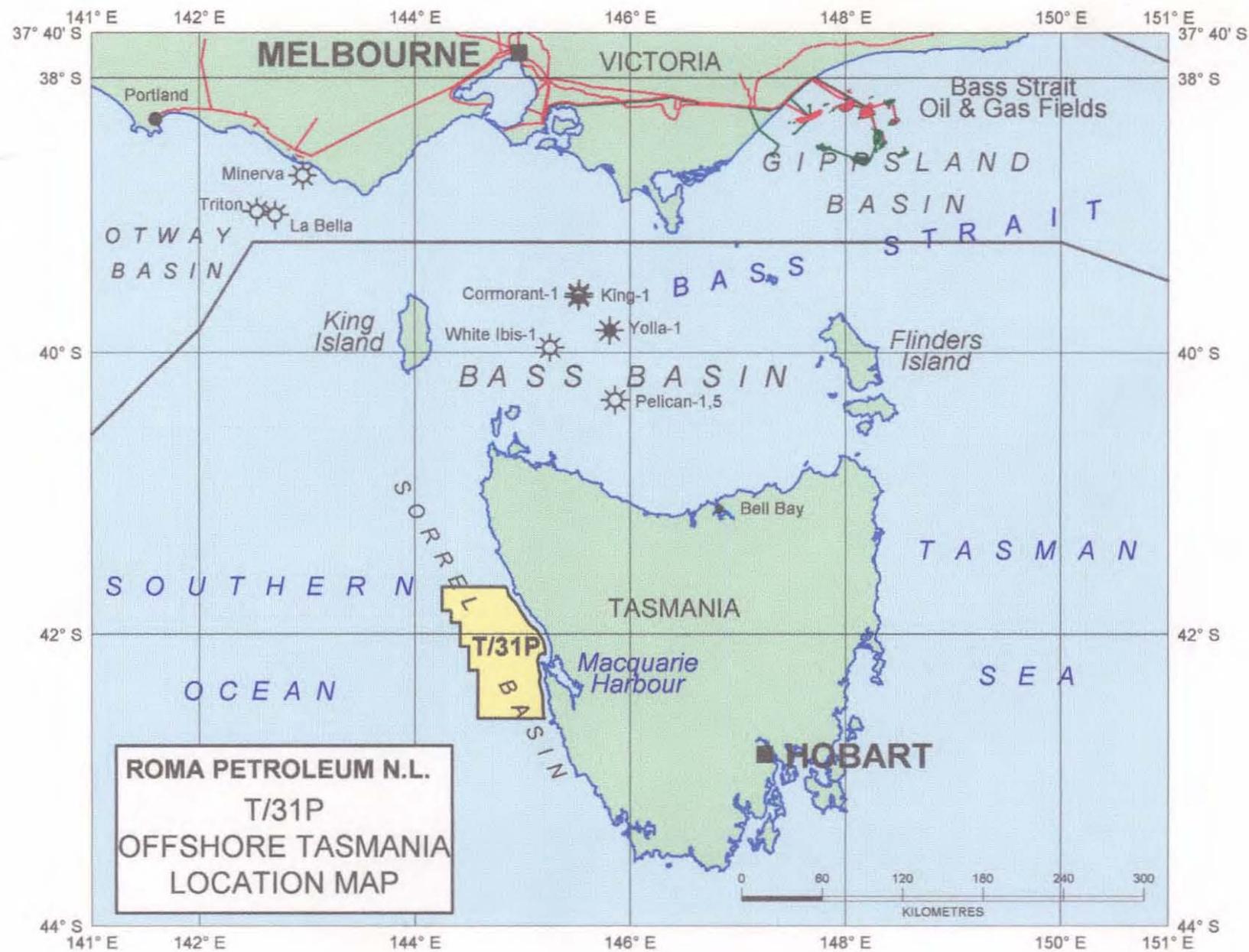
Sorell Basin Tasmania Australia Release of Offshore Petroleum Exploration Areas in 1998 T98-1 and T98-2, C R Calver, Mineral Resources Tasmania, Record 1998/03.

T31P West Coast Tasmania An Exploration Opportunity in the South Margins of Australia - Oil Province, J Conolly, Report for Roma Petroleum Company Pty Ltd, January 2000, (unpublished).

The Biostratigraphy of the Amoco Australia Petroleum Company Cape Sorell 1 Well Offshore West Tasmania Australia, G W Hughes, W P Seymour, O Varol, Y C Chow, Robertson Research (Singapore) Private Limited, January 1983, (unpublished).

The West Tasmanian Margin An Underrated Petroleum Province, K Hinz, J B Wilcox, M Whiticar, H R Kudrass, N F Exon and D A Feary, Second South-Eastern Australia Oil Exploration Symposium, R C Glenie Editor 1985.

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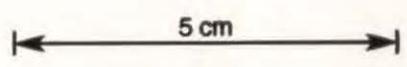
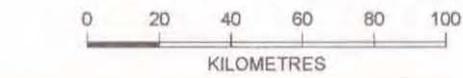
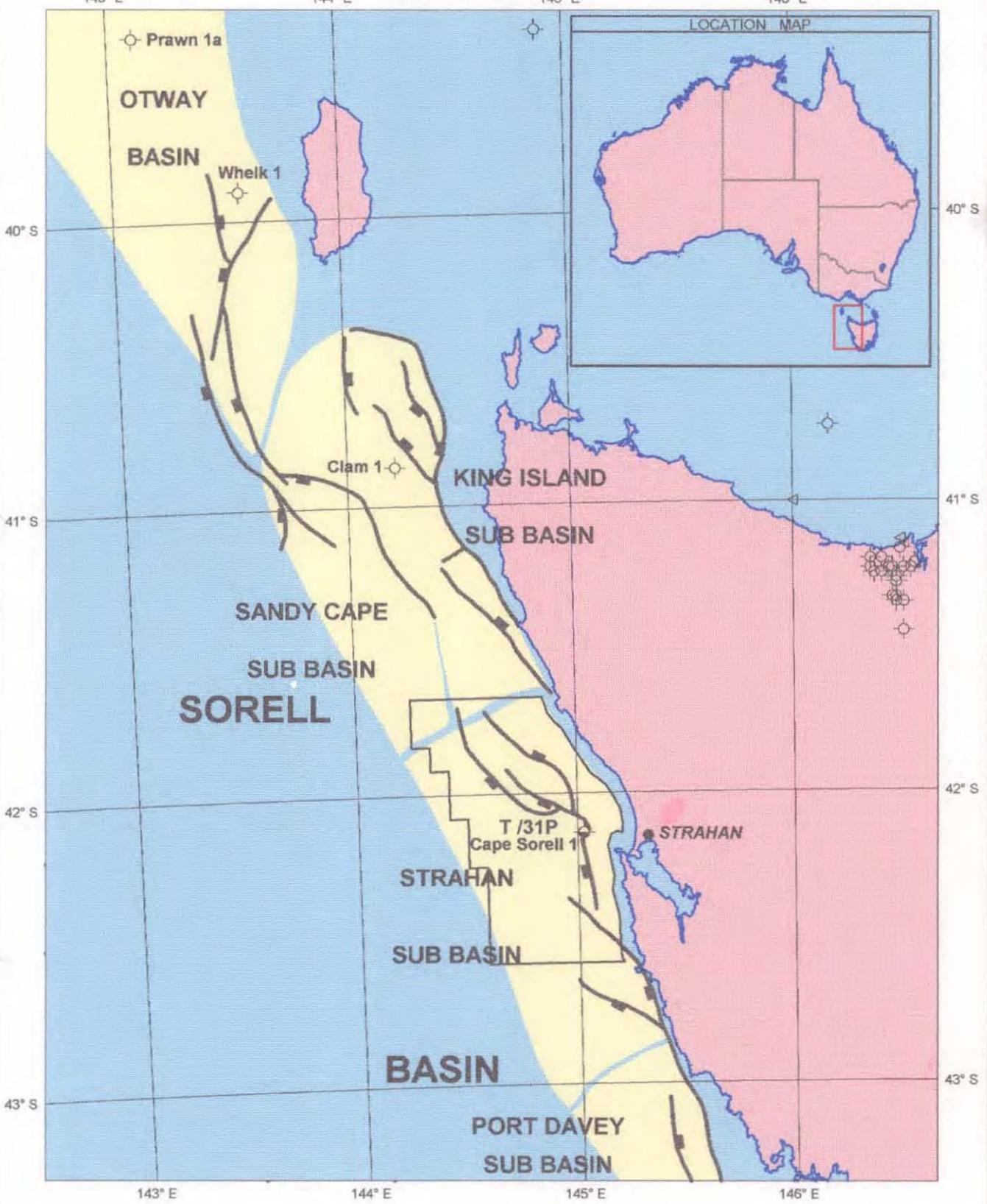
ROMA PETROLEUM N.L.
T/31P
OFFSHORE TASMANIA
LOCATION MAP

5 cm

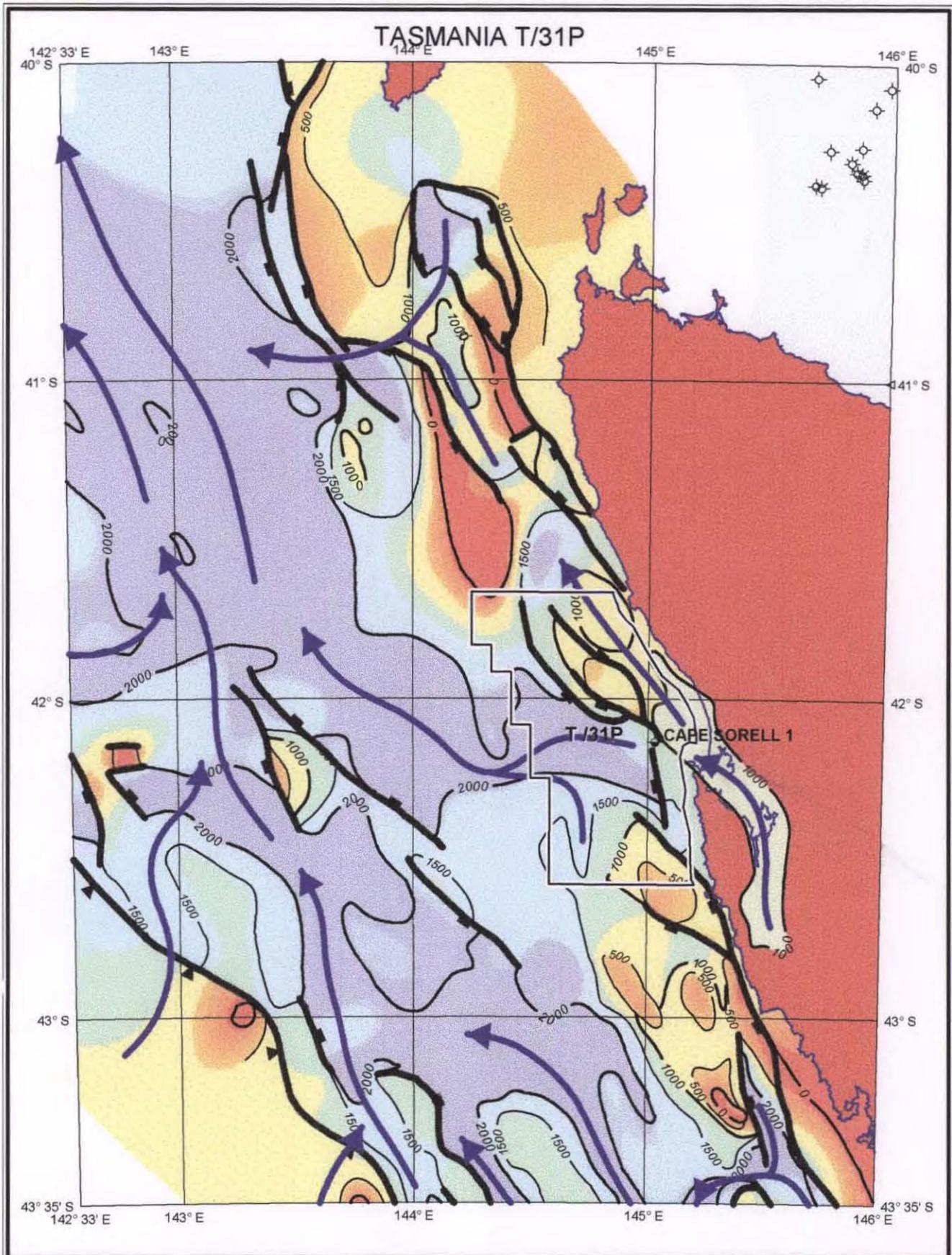
Map Sheet: Roma_Tas_5M
File: Roma_TasOffshore_Location.map5M

Figure 1

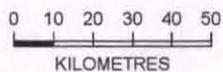
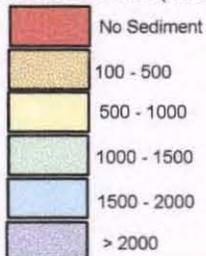
TASMANIA T/31P



ROMA PETROLEUM NL		
TASMANIA T/31P		
REGIONAL SETTING		
(After Conolly & Galloway)		
Author: R.A.Meaney	File: LocationMap A4	Date: June 2000
Data: OIL ON FILM	Mapsheet: Structural A4 Grid	Figure 2



SEDIMENT THICKNESS
IN TWO-WAY TIME (msec)

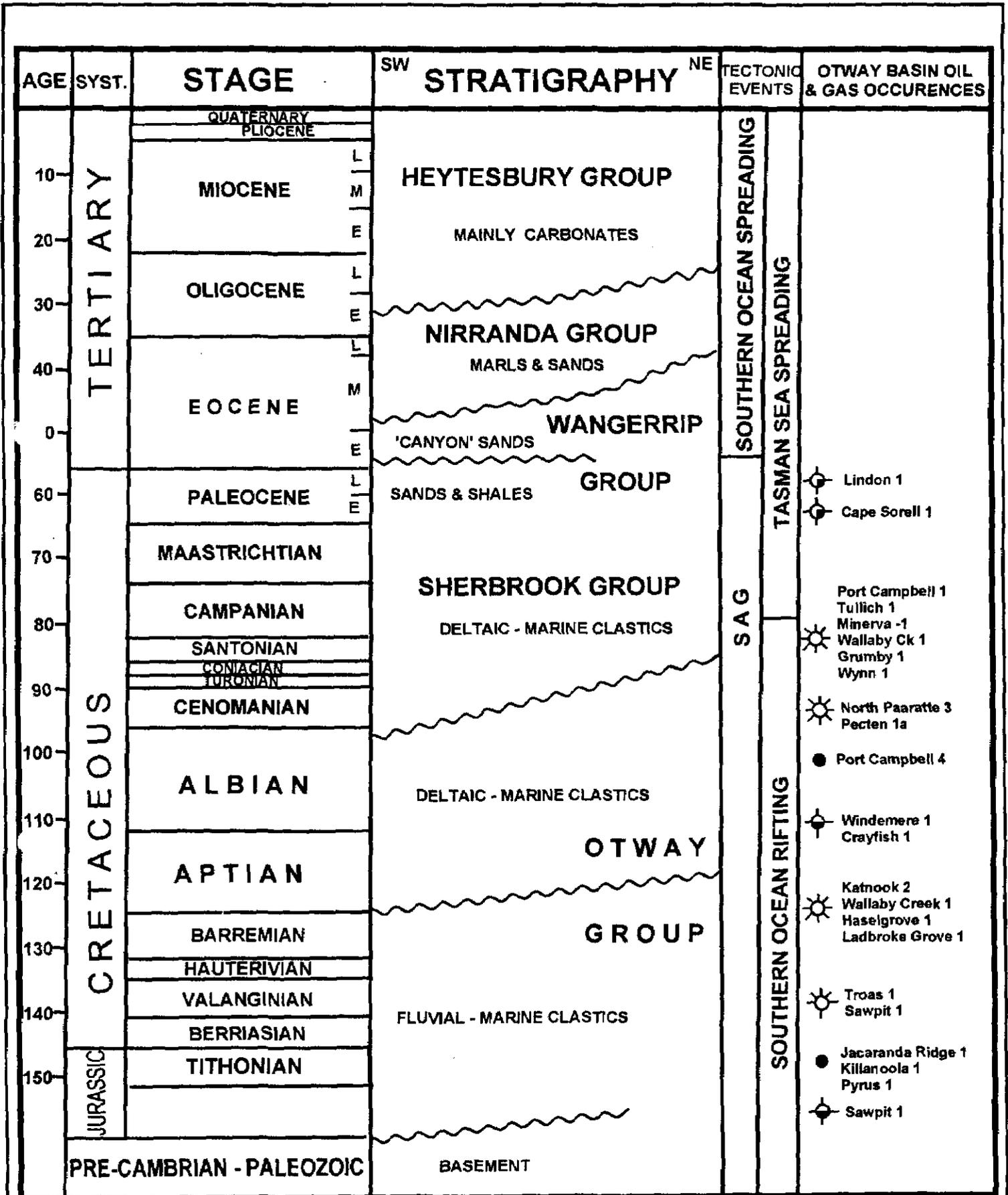


ROMA PETROLEUM NL

**TASMANIA T/31P
STRUCTURAL ELEMENTS
AND SEDIMENT THICKNESS**

Author : J.R.Conolly	File : Sediment_thickness_A4	Date : June 2000
Data : OIL ON FILE	Map Sheet : SedThicknessA4	Figure 3

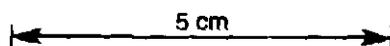
5 cm

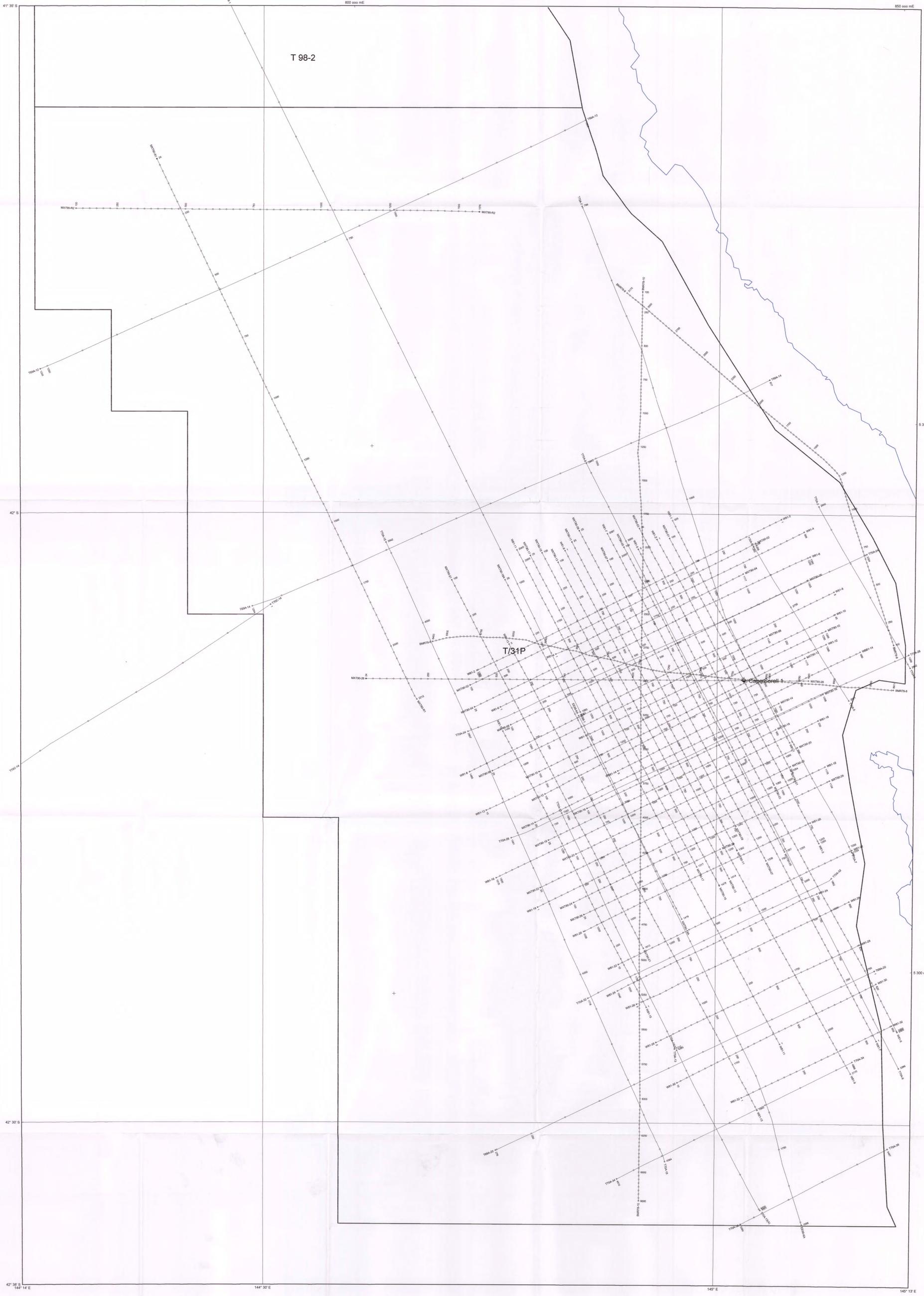


ROMA PETROLEUM NL
T/31P SORELL BASIN
STRATIGRAPHIC TABLE

(After Conolly & Galloway)

Figure 4





T 98-2

T/31P

Cape Sorell 1

572021

ROMA PETROLEUM NL

TASMANIA T/31P
 STRAHAN SUB-BASIN
 SORELL BASIN
 SHOTPOINT BASEMAP



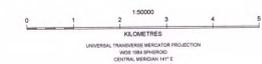
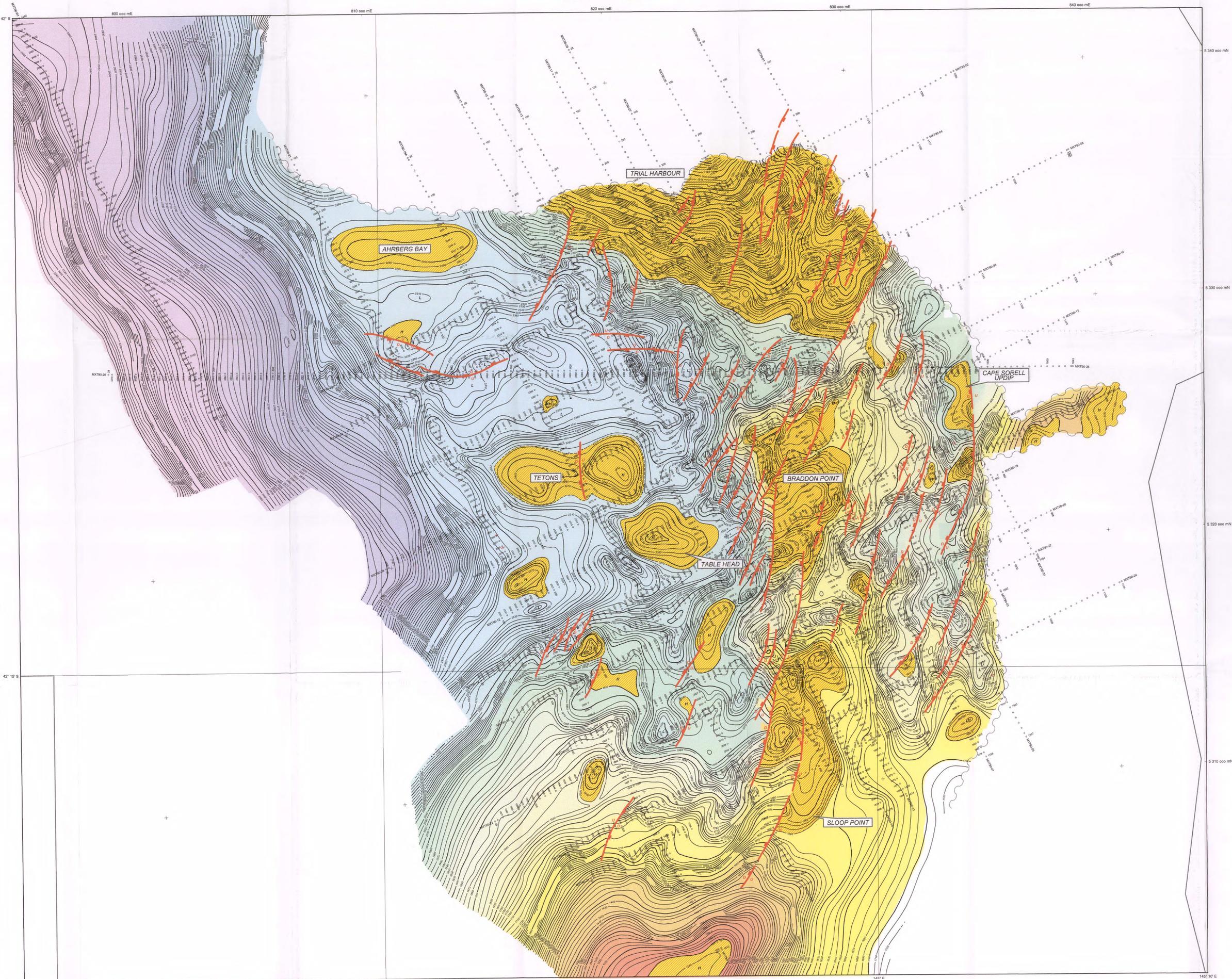
UNIVERSAL TRANSVERSE MERCATOR PROJECTION
 4000 000 METERS
 CENTRAL MERIDIAN 144° E
 FALSE EASTING 500000 METERS

Author: R.A.Meany	Revision: T/31P_001	Date: June 2000
Date: 06_06_00	File Name: shotpoint_basemap	Enclosure: 1

5 cm

CR-0471

TASMANIA T/31P



ROMA PETROLEUM NL

TASMANIA T/31P
STRAHAN SUB-BASIN
SORELL BASIN
UPPER CRETACEOUS ?
TIME STRUCTURE MAP

Author: S.A. Meaney	Contour Interval: 10m/25m	Date: June 2000
Drawn: G.L. P.R.	Scale: 1:50,000	Enclosure 2

572023

ENC 3

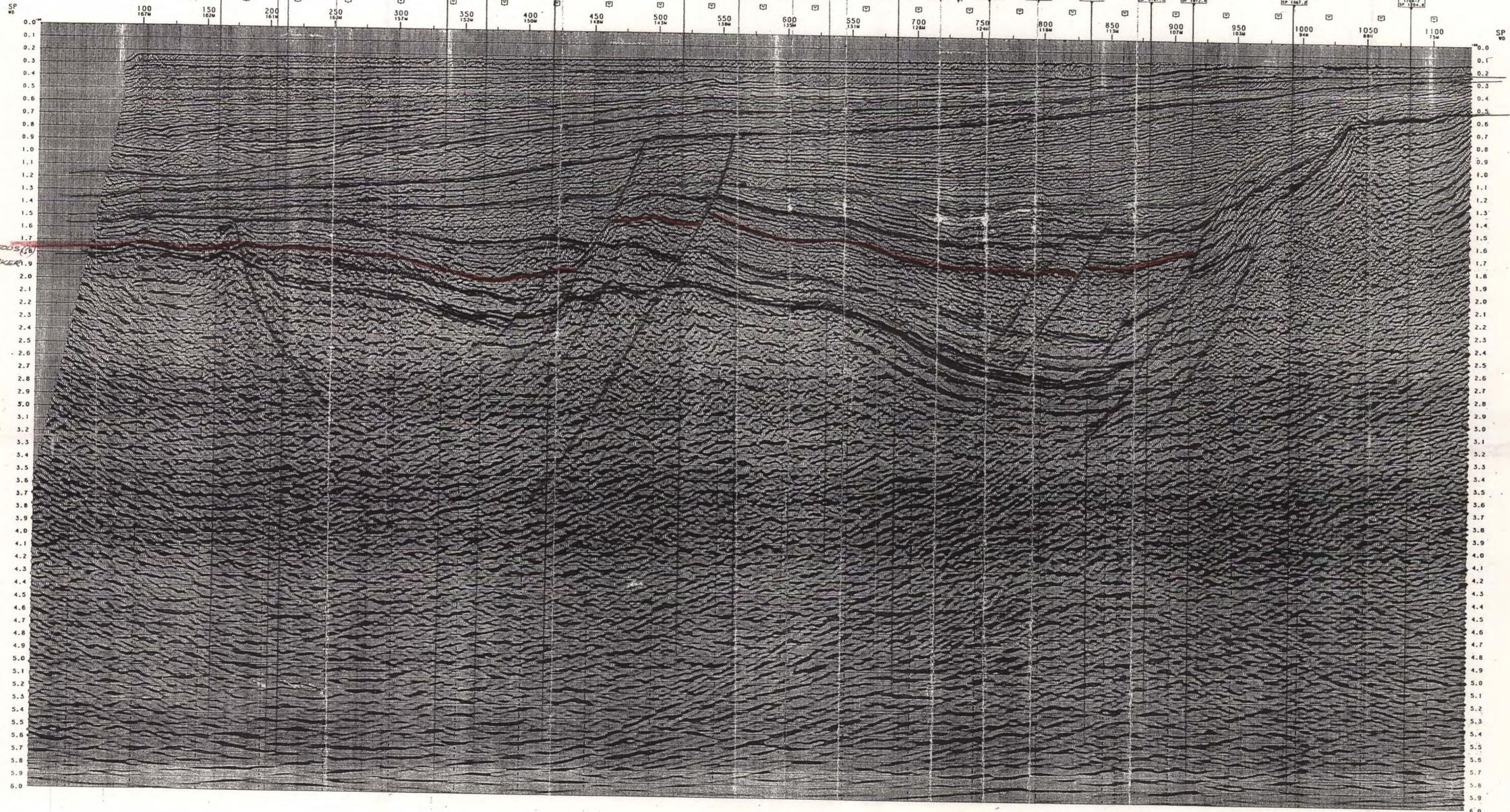
PSLA-90/37

OR-0471

LINE: MXT90-24
SHOT PTS. 100 - 1134
1X7500Z TVF
RPF MIGRATION
POSITIVE POLARITY
SOUTHWEST

LINE: MXT90-24
SHOT PTS. 100 - 1134
1X7500Z TVF
RPF MIGRATION
POSITIVE POLARITY

SLOPE POINT
SLOPE POINT



Upper Crustal Discontinuity
Sedimentary Marker

MAXUS
ENERGY CORPORATION

AREA: OFFSHORE TASMANIA
PROSPECT: T/24P

DALLAS DIGITAL CENTER: JOB # 5582
PROCESSING DATE: JULY 1991
DATUM PLANE: SEA LEVEL
APPROVED BY: DM/PH

RECORDING INFORMATION:
RECORDED ON: MARIUS ENERGY COMPANY
CONVERTED BY: MARIUS ENERGY COMPANY
SOURCE: AIRGUN ARRAY
SHOT POINT: 100-1134
SHOT DEPTH: 12.0 M
SHOT TO WAY POINT: NOT AVAILABLE
INSTRUMENTS:
FILTER: 12.0 M
RECORD INTERVAL: 0.1 SEC
RECORD LENGTH: 0.1 SEC
CABLE: TYPE OF CABLE: STRONGER
CABLE LENGTH: 2100 M
CABLE NO.: 12.0 M
CABLE INTERVAL: 12.0 M
NO. SHOTS RECORDED: 100

WESTERN GEOPHYSICAL

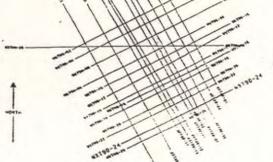
PROCESSING SEQUENCE:
1. SEG-D CONVERT: 4 MS
PROCESSED RECORD RATE: 0.125 SEC
NO. OF TRACES PROCESSED: 100
2. PREPROCESSING:
TRACE EDITING
GEOMETRIC CORRECTION
NUMERICAL SPREADING CORRECTION
3. VELOCITY ANALYSIS: VELMAP 1.0M SPACING
4. DEBN STEERING: 12.0 M, WAVE 2
5. DECONVOLUTION:
TYPE: DECONVOLUTION
PREDICTIVE DISTANCE: 4.0 M
OPTIMUM LENGTH: 4.0 M
NUMBER OF WINDOWS: 1 (OPTIMAL VARIANTS)
PREVENTION: 0.0 SEC
6. VELOCITY ANALYSIS: VELMAP 1.0M SPACING
7. 3D00Z OPTIMUM FOLD REDUCTION
TYPE: 3D00Z OPTIMUM FOLD REDUCTION
8. P-N DEMULTIPLY: PASS POS AND 3D00Z DIRS
9. DIP MOVEOUT CONNECTION
COMMON OFFSETS TO 300Z
10. VELOCITY ANALYSIS: VELMAP 1.0M SPACING
11. 3D00Z MOVEOUT AND STACK
12. REGRIP RECONSTRUCTION
NOT AVAILABLE
13. RAZIFL PREDICTIVE FILTER
14. TIME VARIANT FILTER:
TIME ZONE: LOW CUT HIGH CUT
A: 0.0 0.0
B: 0.0 0.0
C: 0.0 0.0
D: 0.0 0.0
E: 0.0 0.0
F: 0.0 0.0
G: 0.0 0.0
H: 0.0 0.0
I: 0.0 0.0
J: 0.0 0.0
K: 0.0 0.0
L: 0.0 0.0
M: 0.0 0.0
N: 0.0 0.0
O: 0.0 0.0
P: 0.0 0.0
Q: 0.0 0.0
R: 0.0 0.0
S: 0.0 0.0
T: 0.0 0.0
U: 0.0 0.0
V: 0.0 0.0
W: 0.0 0.0
X: 0.0 0.0
Y: 0.0 0.0
Z: 0.0 0.0
FILTER TIMES VARY WITH TIME STRUCTURE
15. DRIN: BLENDED 12 PASS TRACE EQUALIZATION

LEGEND
SP: SURFACE POINT
WD: WATER DEPTH
A: AIRGUN
B: BOAT

DISPLAY:
HORIZONTAL SCALE: 1 CM = 250 M
VERTICAL SCALE: 1 CM = 0.5 SEC
PLOT POLARITY: POSITIVE NUMBER - BLACK PEAK
PLOT POLARITY: POSITIVE NUMBER - BLACK PEAK

NOTATIONS:
FIELD VELOCITY CORRECTION:
OF POSITIVE VELOCITY IS A NEGATIVE NUMBER
OF NEGATIVE VELOCITY IS A POSITIVE NUMBER
PLOTTING EVERY OTHER TRACE

HORIZONTAL SCALE: 1 CM = 250 M
40 TRACE INTERVALS - 1 KM
2.0 KM



MXT90-24
MARIUS

LINE: MXT90-08
 SHOT PTS. 1143 - 25
 1X7500% TVF
 RPF MIGRATION
 POSITIVE POLARITY

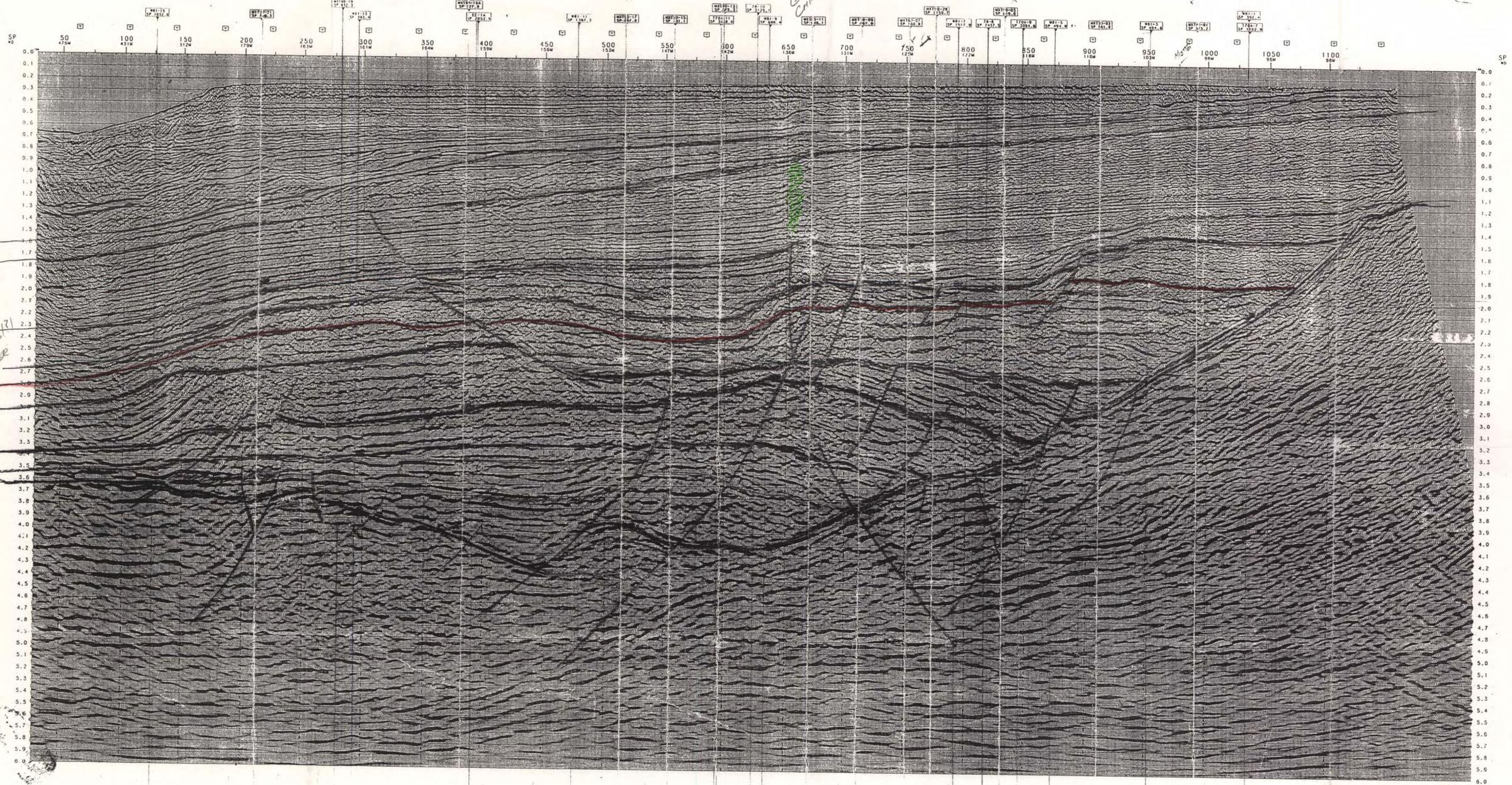
TETONS (WEST) TETONS (EAST)
 TETONS PROSPECT

5 cm

572025
 PSLA- 90/37

ENC 6
 OR-0471

LINE: MXT90-08
 SHOT PTS. 1143 - 25
 1X7500% TVF
 RPF MIGRATION
 POSITIVE POLARITY



UPPER CARBONIFEROUS (?)
 SETBACK MARKER

MAXUS ENERGY CORPORATION

AREA: OFFSHORE TASMANIA
 PROSPECT: T/24P

DALLAS DIGITAL CENTER: JOB # 5382
 PROCESSING DATE: JULY 1991
 DATUM PLANE: SEA LEVEL
 APPROVED BY: [Signature]

RECORDING INFORMATION:

RECORDED BY:	WARD EMBERT COOP
PROJECT TIME (H):	08:00
PROJECT TIME (M):	00
PROJECT TIME (S):	00
PROJECT TIME (D):	00
PROJECT TIME (M):	00
PROJECT TIME (S):	00
PROJECT TIME (D):	00

SOURCE:

CHERRY SOURCE:	CHERRY SOURCE
CHERRY SOURCE (M):	200
CHERRY SOURCE (S):	10
CHERRY SOURCE (D):	10
CHERRY SOURCE (M):	10
CHERRY SOURCE (S):	10
CHERRY SOURCE (D):	10

INSTRUMENTS:

TYPE:	1200
FILE:	1200
RECORDING INTERVAL:	0.100
RECORDING LENGTH:	0.100
RECORDING CHANNEL:	0.100

CABLE:

TYPE OF CABLE:	STREUMER
CABLE LENGTH:	1200
CABLE WEIGHT:	1200
CABLE DIAMETER:	1200
CABLE MATERIAL:	1200
CABLE COLOR:	1200

PROCESSING SEQUENCE:

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2. DATA CHECK
3. DATA CHECK
4. DATA CHECK
5. DATA CHECK
6. DATA CHECK
7. DATA CHECK
8. DATA CHECK
9. DATA CHECK
10. DATA CHECK
11. DATA CHECK
12. DATA CHECK
13. DATA CHECK
14. DATA CHECK
15. DATA CHECK

LEGEND:

RD	VELOCITY ANOMALY
RD	WATER REFRACTION

DISPLAY:

HORIZONTAL SCALE: 1 CM = 250 M
 TRACE INTERVALS: 1 M

NOTATIONS:

FIELD VELOCITY CONVERSION: POSITIVE NUMBER
 OF LOCALITY AT TOP OF SECTION: POSITIVE NUMBER
 OF LOCALITY AT BOTTOM OF SECTION: POSITIVE NUMBER
 POSITIVE NUMBER - BLACK PEAK
 POSITIVE NUMBER - BLACK PEAK

LINE LOCATION MAP:

MXT90-08
 MILLARCO

LINE: MXT90-28
 SHOT PTS. 1643-24
 1X7500Z TVF
 APF MIGRATION
 POSITIVE POLARITY

572026 LINE: MXT90-28
 SHOT PTS. 1643-24
 1X7500Z TVF
 APF MIGRATION
 POSITIVE POLARITY

ENC 6

OR-0471

5 cm

PSLA-90/37

WEST

MAXUS
 ENERGY CORPORATION

AREA: OFFSHORE TASHANIA
 PROSPECT: T/24P
 DALLAS DIGITAL CENTER
 PROCESSING DATE: FEBRUARY 1991
 SECTOR: PLAINS
 APPROVED BY: SEA 04/91

RECORDING INFORMATION:
 RECORDING DATE: 1989
 ACQUISITION BY: MGS
 SOURCE: 1. SOURCE: 1. SOURCE: 1. SOURCE: 1. SOURCE: 1.
 INSTRUMENTS: 1. INSTRUMENTS: 1. INSTRUMENTS: 1. INSTRUMENTS: 1. INSTRUMENTS: 1.
 CABLE: 1. CABLE: 1. CABLE: 1. CABLE: 1. CABLE: 1.



PROCESSING SEQUENCE:
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 3. WAVELENGTH ANALYSIS
 4. VELOCITY ANALYSIS
 5. WAVE SPLITTING
 6. DECONVOLUTION
 7. SMOOTHER
 8. NMO
 9. STACK
 10. GATHER CORRECTION
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 378. SMOOTHER
 379. NMO
 380. STACK
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 382. VELOCITY ANALYSIS
 383. WAVE SPLITTING
 384. DECONVOLUTION
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 638. NMO
 639. STACK
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 700. SMOOTHER
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 702. STACK
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 704. VELOCITY ANALYSIS
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 935. VELOCITY ANALYSIS
 936. WAVE SPLITTING
 937. DECONVOLUTION
 938. SMOOTHER
 939. NMO
 940. STACK

572027
PSLA-90/37

ENC 7
OR-0471

5 cm

LINE: MXT90-05
SHOT PTS. 100-1346
1 X 7500% TVF
RPF MIGRATION
POSITIVE POLARITY

NORTHWEST

MAXUS
ENERGY CORPORATION

AREA: OFFSHORE TASMANIA
PROSPECT: T/24P
DALLAS DIGITAL CENTER: JOB # 5382
PROCESSING DATE: JULY 1991
DATA PLAN: SEA LEVEL
APPROVED BY:

RECORDING INFORMATION:
RECORDED BY: MAXUS ENERGY CORP.
ACQUISITION BY: WESTERN GEOPHYSICAL
SOURCE: ENERGY SOURCE: AIRGUN ARRAY
TOTAL GUN VOLUME: 2100 cu in
GUN PRESSURE: 2000 PSI
DISPERSED INTERVAL: 20% AVAILABLE
SOURCE TO SURF: 100% AVAILABLE
INSTRUMENTS: SYSTEM: 1100A 1000
RECORDING INTERVAL: 2MS
RECORD LENGTH: 6 SECS
FORMAT: SEC-2 DIG CHANNEL
CABLE: TYPE OF CABLE: STREAMER
CABLE NO.: 3700
CABLE DATE: 12/88
CABLE LENGTH: 12.5 KM
NO. GROUPS RECORDED: 300

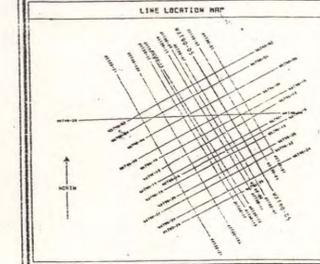
WESTERN GEOPHYSICAL

PROCESSING SEQUENCE:
1. SEG-CORRECTION
2. PRE-PROCESSING
3. VELOCITY ANALYSIS
4. BEAM STEERING
5. DECONVOLUTION
6. VELOCITY ANALYSIS
7. 3DDX OPTIMUM FOLD REDUCTION
8. F-X DEMULTIPLY
9. DIP MOVEMENT CORRECTION
10. VELOCITY ANALYSIS
11. 3DDX MOVEMENT AND STACK
12. HIGH DIP REJECTION
13. ORIGINAL PREDICTIVE FILTER
14. TIME VARIANT FILTER
15. CHECK

LEGEND
W VELOCITY ANALYSIS
M INTERPOLATION
WD WIDE WINDOW

DISPLAY:
HORIZONTAL SCALE: 1 CM = 250 M
VERTICAL SCALE: 1 CM = 0.5 SEC
POLARITY: POSITIVE NUMBER - BLACK PEAK

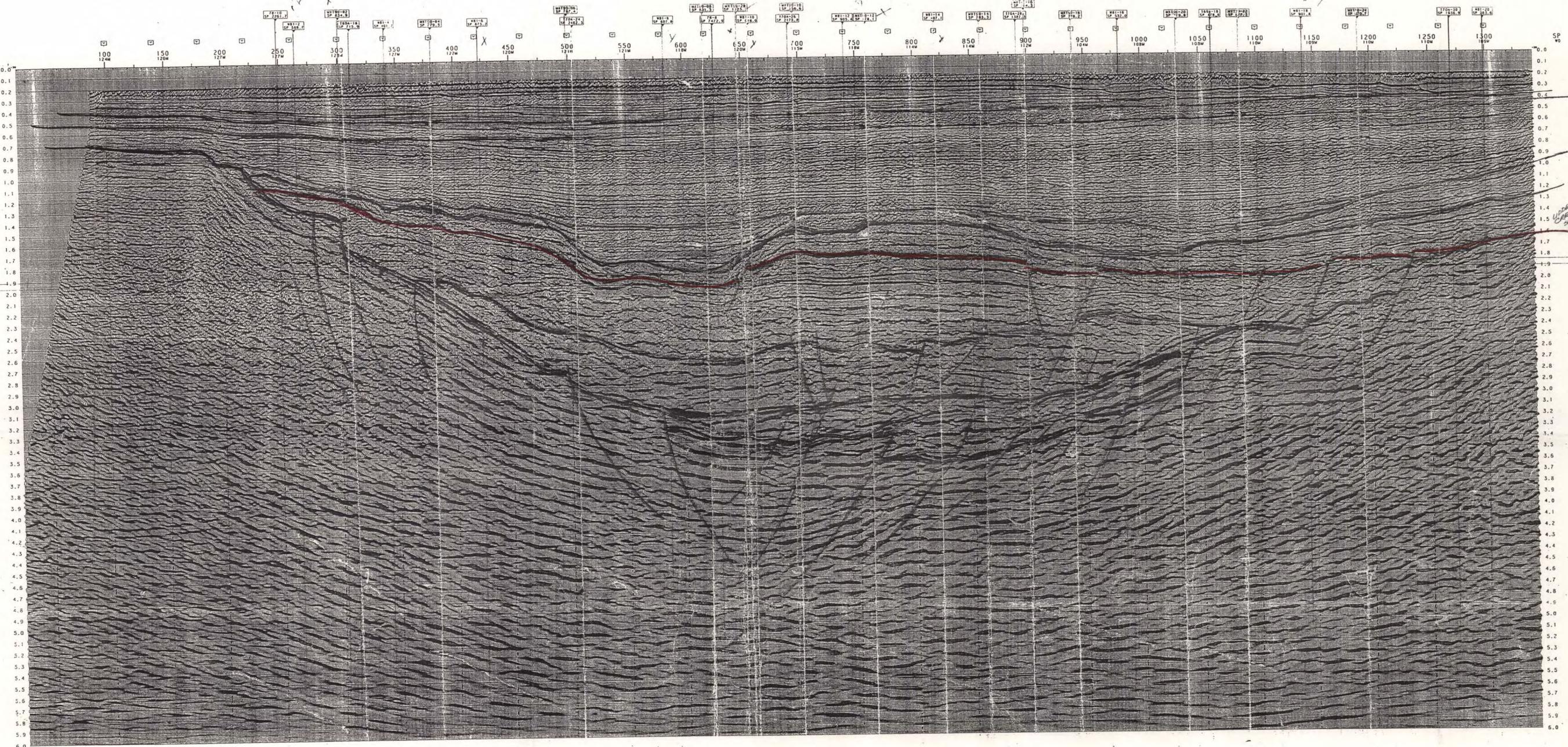
NOTATIONS:
HORIZONTAL SCALE: 1 CM = 250 M
40 TRACE INTERVALS = 1 KM
2.0 KM



LINE: MXT90-05
SHOT PTS. 100 - 1346
1 X 7500% TVF
RPF MIGRATION
POSITIVE POLARITY

TOTAL HARBOUR
PROSPECT

BRADON POINT
PROSPECT



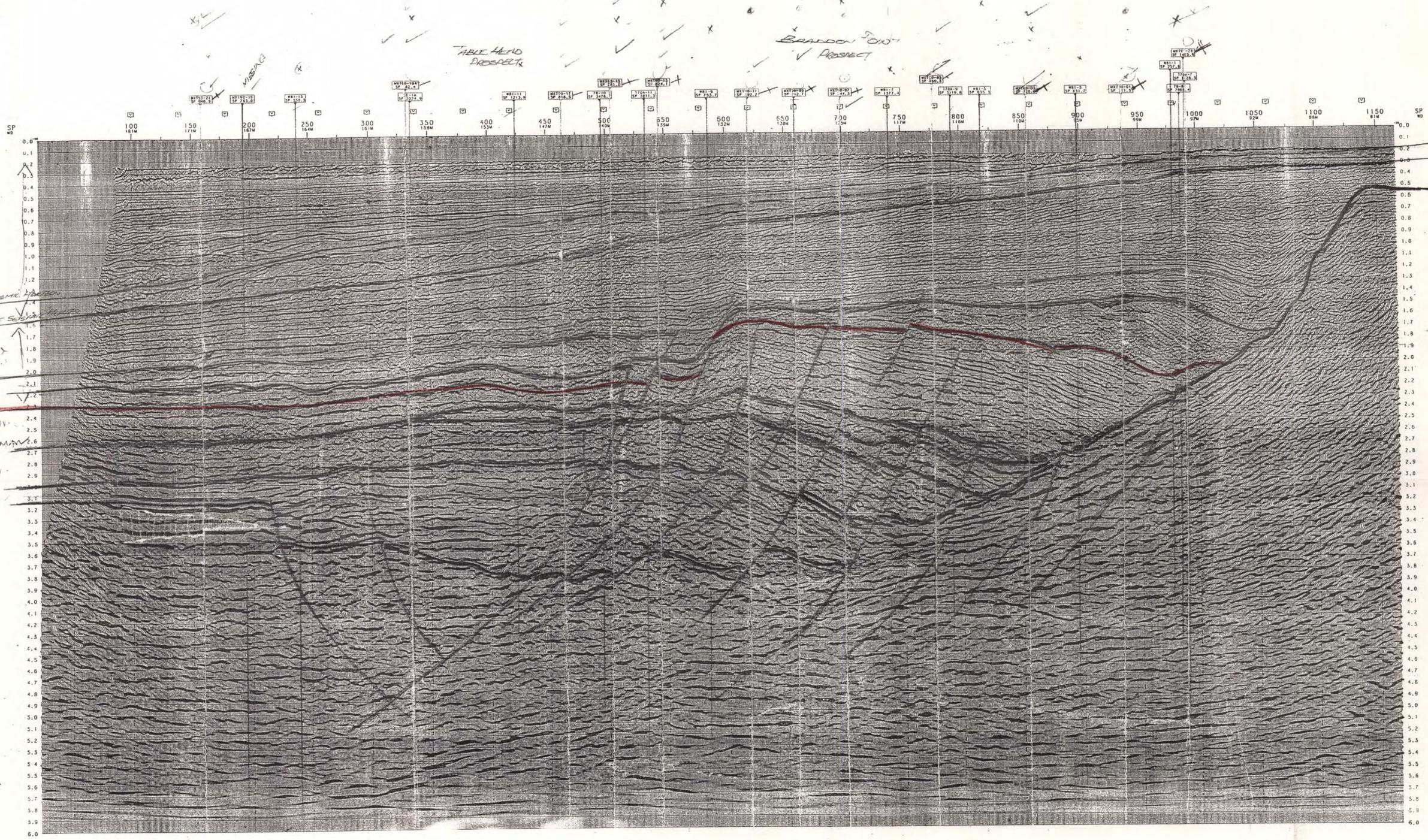
MXT90-05
M/L/1/1/1/1/1

LINE: MXT90-12
 SHOT PTS. 100 - 1170
 1X7500Z TVF
 RPF MIGRATION
 POSITIVE POLARITY

572029

LINE: MXT90-12
 SHOT PTS. 100 - 1170
 1X7500Z TVF
 RPF MIGRATION
 POSITIVE POLARITY
 PSLA- 90/37

ENC 9
 OR-0471



Neogene
 Paleogene
 Paleozoic
 Cambrian
 Permian
 Triassic
 Jurassic
 Cretaceous
 Tertiary
 Quaternary

SOUTHWEST
MAXUS
 ENERGY CORPORATION

ARR: OFFSHORE TASHANIA
 PROSPECT: T/24P

RECORDING INFORMATION:
 RECORDING SYSTEM: MARIUS
 SOURCE: MARIUS
 INSTRUMENTS: MARIUS
 CABLE: MARIUS

WESTERN GEOPHYSICAL

PROCESSING SEQUENCE:
 1. SEG-D CONVERT
 2. PREPROCESSING
 3. VELOCITY ANALYSIS
 4. BORN STEERING
 5. DECONVOLUTION
 6. VELOCITY ANALYSIS
 7. SMOOZ OPTIMIZ FOLD REDUCTION
 8. F-K DEMULTIPLE
 9. DIP MOVEOUT CORRECTION
 10. VELOCITY ANALYSIS
 11. SMOOZ MOVEOUT AND STRETCH
 12. HIGH DIP MOVEOUT
 13. ANOIAL PREDICTIVE FILTER
 14. TIME VARIANT FILTER
 15. GAIN

VELOCITY LEGEND
 V = VELOCITY
 W = WAVELENGTH

DISPLAY:
 HORIZONTAL SCALE: 1 CM = 250 M
 VERTICAL SCALE: 1 CM = 0.2 SEC

LINE LOCATION MAP

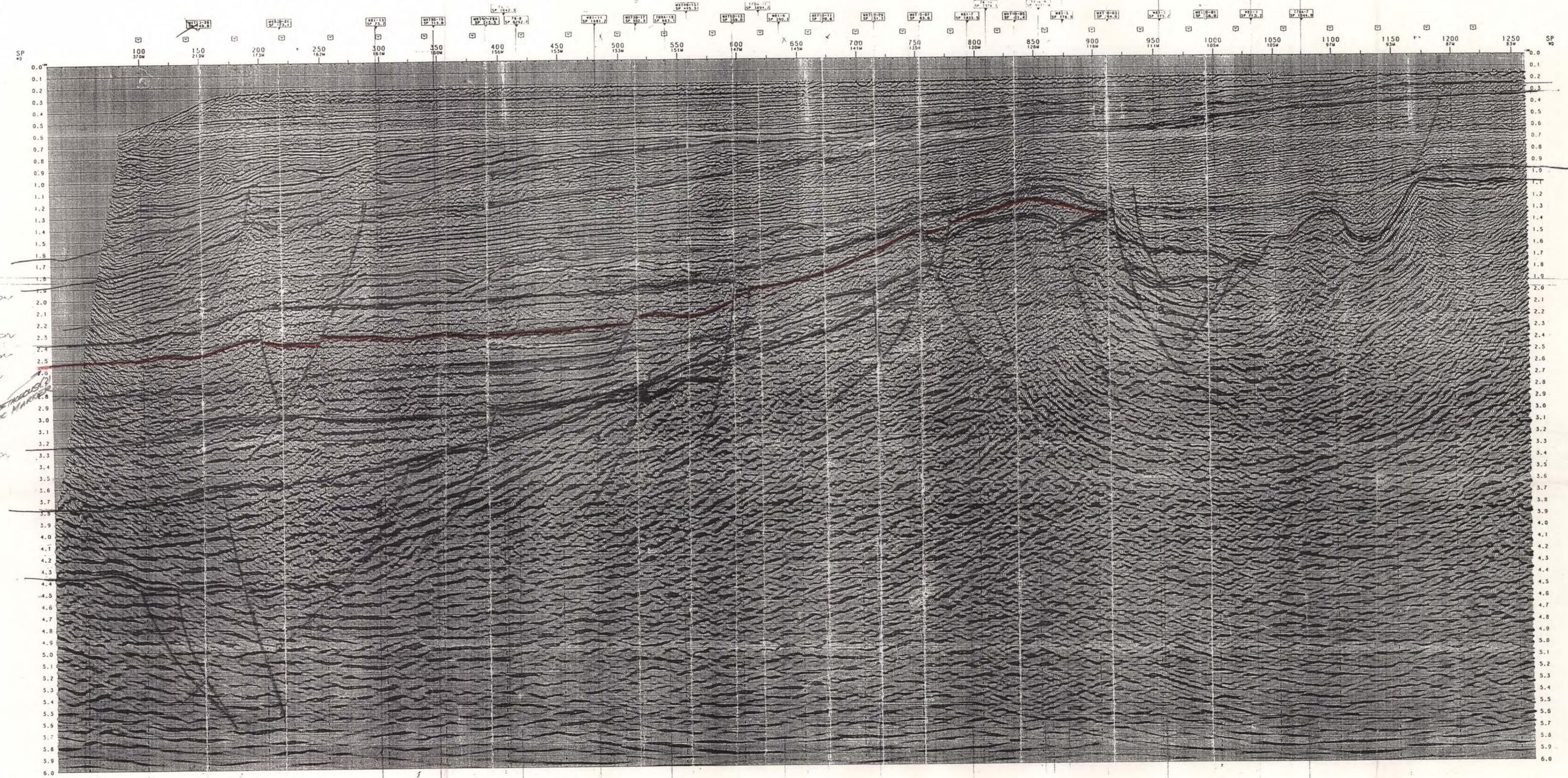
MXT90-12
 Migration

LINE: MXT90-02
 SHOT PTS. 100 - 1265
 1X7500Z TVF
 RPF MIGRATION
 POSITIVE POLARITY

TRIAL HARBOUR
 PROSPECT
 TRIAL
 HARBOUR

572030
 5 cm

LINE: MXT90-02 ENC 10
 SHOT PTS. 100 - 1265
 1X7500Z TVF
 RPF MIGRATION
 POSITIVE POLARITY
 PSLA-90/31
 SOUTH WEST



MAXUS
 ENERGY CORPORATION

AREA: OFFSHORE TASMANIA
 PROSPECT: T/24P
 DALLAS DIGITAL CENTER, JOB # 5387
 PROCESSING DATE: JUL 1991
 DATA PLANE: SEA LEVEL
 APPROVED BY:

RECORDING INFORMATION:
 RECORDING SYSTEM: 24 BIT DIGITAL
 ACQUISITION BY: WESTERN GEOFYSICAL
 SOURCE: 24 BIT DIGITAL
 INSTRUMENTS: 24 BIT DIGITAL
 CABLE TYPE: 24 BIT DIGITAL

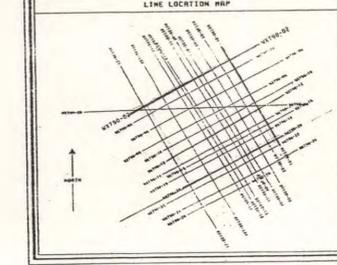
WESTERN GEOFYSICAL

PROCESSING SEQUENCE:
 1. SEG-D CONVERT
 2. PREPROCESSED
 3. VELOCITY ANALYSIS
 4. DECONVOLUTION
 5. DECONVOLUTION
 6. VELOCITY ANALYSIS
 7. 3D00Z OPTIMUM FOLD REDUCTION
 8. F-K DEMULTIPLE
 9. DIP MOVEOUT CORRECTION
 10. VELOCITY ANALYSIS
 11. 3D00Z MOVEOUT AND STACK
 12. HIGH DIP RECONSTRUCTION
 13. RADIAL PREDICTIVE FILTER
 14. TIME VARIANT FILTER
 15. GAIN

LEGEND
 WAVELENGTH
 VELOCITY
 CONTOURING
 WATER REFRACTION

DISPLAY:
 HORIZONTAL SCALE: 10 TRACES PER CENTIMETER
 VERTICAL SCALE: 10 METERS PER CENTIMETER
 POLARITY: POSITIVE NUMBER - BLACK PEAK

NOTATIONS:
 FIELD POSITION FOLD IS A NEGATIVE NUMBER
 BY LOCATION OF THE FOLD
 PLACING EVERY OTHER TRACE



MXT90-02
 MIGRATED

572031
5 cm

PSLA-90/37
65% 135 63%

02-0471

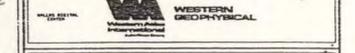
LINE: MXT90-07
SHOT PTS. 100 - 1338
1X7500% TVF
RPF MIGRATION
POSITIVE POLARITY

LINE: MXT90-07
SHOT PTS. 100 - 1338
1X7500% TVF
RPF MIGRATION
POSITIVE POLARITY



AREA: OFFSHORE TASMANIA
PROSPECT: T/24P
DALLAS DIGITAL CENTER: JOB # 5382
PROCESSING DATE: JULY 1991
DATUM PLANE: SEA LEVEL
APPROVED BY: DW/HH

RECORDING INFORMATION:
RECORDED FOR: MAXUS ENERGY CORP
ACQUISITION BY: HELLERSON
WELLS: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

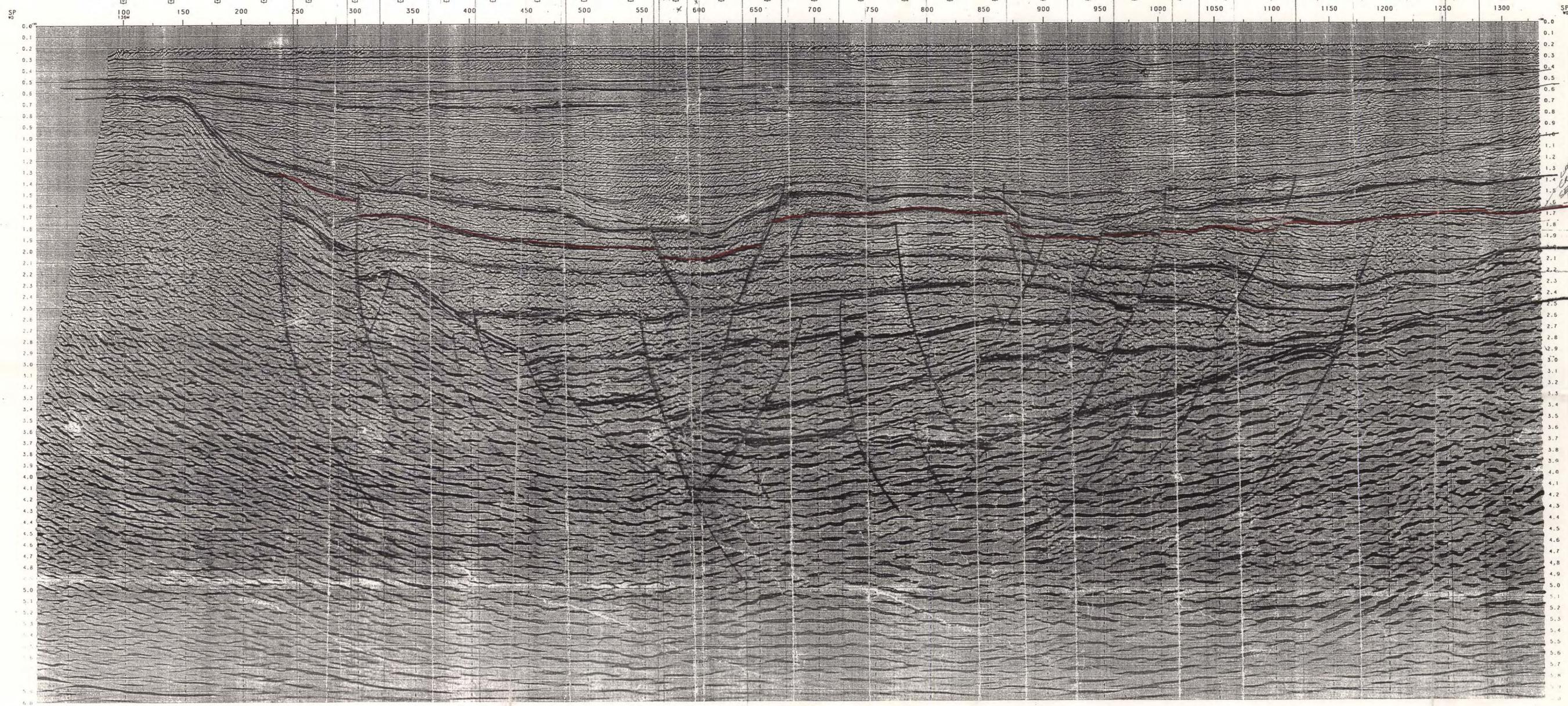
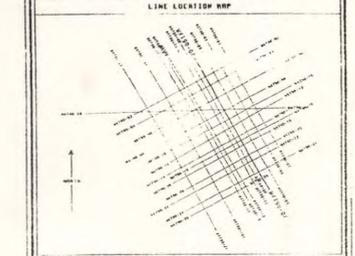


PROCESSING SEQUENCE:
1. SEG-D CONVERT: 4
PROCESS SAMPLE RATE: 4 NS
PROCESS FILTER: 0.1 Hz
2. PREPROCESSING:
SPACE EDITING: 100%
GEOMETRIC CORRECTION: 100%
3. VELOCITY ANALYSIS: VELM 12M SPACING
4. BORN STEERING: 1-2-1 SUM, WAVE 2
5. DECONVOLUTION:
SUGGESTED CONVOLUTION: 100%
PROSPECTIVE DISTANCE: 100%
OPERATION LENGTH: 100%
NUMBER OF WINDOWS: 100%
PREWHITENING: 100%
6. VELOCITY ANALYSIS: VELM 12M SPACING
7. 3RDQZ OPTIMUM FOLD REDUCTION:
TYPE: 100%
8. F-K MULTIPLE:
TYPE: 100%
9. DIP MOVEOUT CORRECTION:
DIP MOVEOUT: 100%
10. VELOCITY CORRECTION:
VELOCITY CORRECTION: 100%
11. 3RDQZ MOVEOUT AND STACK
12. HIGH DIP MIGRATION:
MIGRATION METHOD: 100%
13. ANTI-DIP PRECISE FILTER
14. TIME VARIANT FILTER:
LOW CUT: 0.1 Hz
HIGH CUT: 100 Hz
15. GRM

LEGEND:
+ REFLECTIONS
- SUBSURFACE
WD WATER WAVE
* AIRGUN

DISPLAY:
HORIZONTAL SCALE: 1 CM = 250 M
VERTICAL SCALE: 1 CM = 100 M
POLARITY: POSITIVE

NOTATIONS:
FIELD POLARITY CONVENTION:
BY LOCATION AT GUN POSITION:
BASE CORRECTED TO SEA LEVEL - IN NS REFL UNIT
PLOTING EVERY OTHER TRACE



BALLOON POINT PROSPECT

LINE CORRECTED
SERIALIZED
MIGRATION

MXT90-07
MIGRATION