

**Fifth Year Annual and Quarterly Reports
(to April 4th, 1984)**

Petroleum Exploration Permit T/ 13P.

TPR

OR-104

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UNION TEXAS AUSTRALIA INCORPORATED

FIFTH YEAR ANNUAL REPORT (TO APRIL 4TH, 1984)

PETROLEUM EXPLORATION PERMIT T/13P

OFFSHORE GIPPSLAND BASIN

AUSTRALIA

PART 1

T/13P Part 23.

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C O N T E N T S

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1. ADMINISTRATION

The interests in Permit T/13P are as follows:-

<u>Company</u>	<u>Interest</u>
Union Texas (Operator)	13.973%
Ampol Exploration	10.479%
CRA Exploration	10.479%
Cultus Pacific	5.137%
Metramar	4.795%
Sovereign	2.739%
York	2.398%
Meridian	20.000%
Pan Pacific	16.667%
Valiant Consolidated	8.083%
Ocita	5.250%

During the year work proceeded on the fifth year variant work program which was approved by the designated authority on January 13th 1983. The program involved extensive geophysical and geological studies, and deferral of the drilling of two exploratory wells until the sixth permit year.

On March 14th 1984 Union Texas requested approval from the Director of the Tasmanian Department of Mines of a proposed work program for the sixth permit year of petroleum exploration Permit T/13P. The program was designed to allow Union Texas to further evaluate technical data acquired during the fifth permit year with a view to maturing at least two drillable prospects for drilling in the latter half of the sixth permit year.

The Director granted approval of the program on April 3rd, 1984.

The approved work program split the sixth permit year into two stages. During the initial stage (April 4th - October 3rd 1984) the analytical review of all remaining leads would be conducted. Should this review mature at least two drillable prospects they would be drilled during the second stage (October 4th 1984 - April 3rd 1985). Should the review fail to mature drillable prospects the group would be prepared to propose additional work or surrender the permit by October 4th 1984.

A copy of the sixth year program follows.

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PROPOSED SIXTH PERMIT YEAR WORK PROGRAMEXPLORATION PERMIT T/13PStage 1 (April 4, 1984 - October 3, 1984)

During the first six months of the sixth permit year, Union Texas will further evaluate technical data acquired during the fifth permit year with a view to maturing at least two drillable prospect locations for drilling in the latter half of the permit year. Specific objectives include:-

1. Detailed mapping of existing seismic data to accurately locate and define anomalies on the Southern shelf area.
2. Analytical evaluation of anomalies mapped on the shelf area to determine if they are simple anticlinal structures, sand deposits, reefs or basalt mounds.
3. Detailed evaluation of existing magnetic data to determine if the shelf anomalies reflect basalt mounds.
4. Conduct comprehensive velocity analysis and modelling of at least one of the shelf anomalies if magnetics indicated the structure to be other than basalt.
5. Conduct a feasibility study that would involve consideration of the potential inplace and recoverable reserve estimates.

Stage 2 (October 4, 1984 - April 3, 1985)

Commitment to Stage 2 of the work program would be contingent upon the results of the evaluation performed in Stage 1. If two or more drillable prospects are confirmed, two exploration wells would be drilled in the latter half of the permit year. If two or more drillable prospects are not confirmed, additional work would be recommended, or the permit would be surrendered.

Union Texas received from Pan Pacific a large amount of data on T/13P acquired by previous permit holders. The data transferred includes Magellan and other data ie., original and reprocessed Magellan seismic lines, reports, base maps etc., and the Flinders seismic survey data.

Much of this data had not previously been filed with the Department of Mines. Union Texas completed this transfer during the first quarter of 1984. The company has taken full responsibility for the safe keeping of any data retained for use in the continuing evaluation of T/13P and will transfer the data to the Department of Mines upon relinquishment of the permit.

Following is a review of the results and status of the fifth year work program. Most of the commitments in that program have been fulfilled. Those studies not yet complete will be carried through into the continued evaluation proposed in Stage 1 of the sixth permit year.

2. GEOPHYSICAL AND GEOLOGICAL STUDIES

2.1 INTRODUCTION

The geophysical and geological evaluation presented in the Work Program Variance Application comprised the Fifth Permit Year Program. Formal approval of the Fifth Year Program Variation was received from the Department of Mines on January 13th, 1983.

The Fifth Year Work Program involved extensive geophysical and geological studies designed to assist in the interpretation of leads and hopefully lead to the generation of drillable prospects. It would also add significantly to the understanding of the regional geology and new prospect generation concepts throughout the Gippsland Basin.

2.2 FIFTH YEAR WORK PROGRAM

(A) Geophysical

The Fifth Year Work Program incorporated the following :-

- (i) Acquisition, processing and interpretation of 200 line kilometers of high resolution seismic data and incorporation with the 1982 survey and older surveys.
- (ii) Interpretation of magnetic data acquired in conjunction with the 1983 seismic survey.
- (iii) Seismic stratigraphic studies utilizing all available good quality seismic data.
- (iv) Seismic mapping of basement structure.

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- (v) Seismic mapping of top Latrobe structure.
- (vi) Seismic mapping of potential intra-Latrobe leads.
- (vii) Isopaching of the Latrobe section and intra-Latrobe intervals.
- (viii) Isopaching of the "sand complexes" associated with the intra-Miocene "Gemini Prospect".
- (ix) Trading of seismic data from T/13P for recently acquired data within other permits in the Gippsland Basin.

2.2 (B) Geological

The Fifth Year Work Program was intended to include the following geological studies :-

- (i) Digitization of all available electric logs from wells drilled in the vicinity of Permit T/13P and conduct detailed geological well correlations using the logs generated from the digitization program.
- (ii) Paleo-environmental interpretation of all available well data in order to further investigate the relationship of Permit T/13P to the deep Gippsland Basin.
- (iii) Construction of detailed paleo-geographical maps using all available data.
- (iv) Paleo-structural analyses of the major tectonic elements within Permit T/13P, in order to determine the tectonic development of the Southern Platform.
- (v) Geochemical studies of cuttings available from wells drilled in the vicinity of T/13P in order to investigate the presence of source rocks in the area, the type and distribution of organic material, and to compare this with geochemical results obtained from Pisces No. 1.
- (vi) Further geochemical studies of cutting and sidewall cores from Pisces No. 1., including pyrolysis studies, to determine the specific yield of the Campanian Age Latrobe group sediments within the "Pisces Sub-Basin".
- (vii) Trading of well data from other permits for the Pisces No. 1 well data. Incorporation of all such data with data acquired in T/13P.

- (viii) Determination of the distribution of play types recognised in the Gippsland Basin and which are thought to include:-
- (a) Top Latrobe structural/stratigraphic plays.
 - (b) Gurnard Formation and Lakes Entrance Formation Greensand pinch-out plays.
 - (c) Intra-Latrobe stratigraphic plays.
 - (d) New Intra-Latrobe structural plays.
 - (e) Intra-Miocene structural and stratigraphic plays.
 - (f) Stratigraphic-structural plays associated with granite wash lying above basement topographic features
- (ix) Extension of regional concepts/play types to other areas of the Gippsland Basin, in particular to the Northern flank and into open acreage where similar, or equivalent play types might be recognised.

2.3 WORK PROGRAM RESULTS AND STATUS

The following summarises results of the various geophysical and geological activities conducted during the fifth permit year and reports the status of each commitment:-

(A) Geophysical

- (i) Shooting of the 1983 Seismic Program was performed during late March, early April 1983, by Geophysical Service Incorporated utilizing their Eugene McDermott II shooting and recording boat and a high resolution multiplex 240 channel streamer. The survey was completed on April 9th, 1983 after shooting a total of 236 line kilometers of program. These data are identified as GUT 83P.

Geophysical Service Incorporated in Sydney processed the data 30 fold utilizing time variant filter and time variant scaling. The entire 236 line km of data was migrated.

All partners and the Tasmanian Department of Mines have been provided copies of the data and shot point maps. The original seismic sections and base maps are stored in Union Texas' Melbourne office.

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The recently acquired data has been integrated with data from previous surveys. Picked horizons include Water Bottom, Intra-Oligocene, Top Latrobe, Campanian and Basement. The following maps were completed and filed with the Department of Mines in January 1984.

(a) Time structure maps:-

- (1) Intra-Oligocene
- (2) Top Latrobe
- (3) Basement

(b) Time interval map.

- (1) Top Latrobe-Basement

Since January, interpretation has been revised and extended to use more of the data from older surveys. This has provided more coverage of the permit area and enabled more detailed mapping of leads. Preliminary maps based on this interpretation were submitted to the Department of Mines in early April 1984. They included:-

(a) Time structure maps

- (1) Water bottom
- (2) Intra-Oligocene
- (3) Top Latrobe

(b) Depth structure maps

- (1) Water Bottom
- (2) Intra-Oligocene
- (3) Top Latrobe

(c) Average velocity maps

- (1) Intra-Oligocene
- (2) Top Latrobe

Attempts have been made to pick an intra-Latrobe Campanian event in the northeast part of the block. Difficulties in picking may preclude the mapping of regional structure at this level. At best, mapping may only be possible over restricted areas.

Maps on basement and interval time and thickness maps will be produced shortly.

COMMITMENT FULFILLED.

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- (ii) The magnetometer data recorded in conjunction with the 1983 seismic program was interpreted by Exploration Consultants Limited. Final maps and report were received in November and copies submitted to the Department of Mines.

Union Texas has continued the interpretation of this data, specifically with the aim of determining whether anomalies seen on seismic sections over the southern platform area are volcanic or sedimentary in nature.

As a further aid to the evaluation of these anomalies seismic modelling studies were conducted in an attempt to determine the lithology and fluid content of the features.

This work was proposed as part of the work program for Stage 1 of the sixth permit year.

Details on these studies have been completed and submitted to the Department of Mines. The reports are titled as follows:-

1. "Gippsland Basin, Australia, Vic P/12, T/13P. Report on the Magnetic and Seismic Modelling of Intra-Latrobe Features" - J.D.Underwood, March 20, 1984.
2. "The Evaluation of Magnetic Anomalies Over Anomalous Seismic Reflectors in a Portion of the Gippsland Basin, Offshore South Eastern Australia" - for Union Texas Petroleum by Aero Service Division, Western Geophysical Company of America, March 1984.

COMMITMENT FULFILLED.

- (iii) Seismic stratigraphic studies are in progress and will be used locally for evaluation of leads/prospects identified during the first half of the sixth permit year.

COMMITMENT YET TO BE FULFILLED.

- (iv) Mapping of basement structure was completed in March 1984.

COMMITMENT FULFILLED.

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- (v) Mapping of Top Latrobe structure was likewise completed in March 1984.

COMMITMENT FULFILLED.

- (vi) Structure maps on the Intra-Latrobe campanian event have not yet been produced. Interpretation at this level has been difficult and may only prove possible over restricted areas.

COMMITMENT YET TO BE FULFILLED.

- (vii) Isochron maps of the interval Top Latrobe-Basement were completed in March 1984. Maps for Intra-Latrobe intervals will follow the interpretation of the Campanian event.

COMMITMENT YET TO BE FULFILLED.

- (viii) Isopachs over the "Gemini" prospect have not yet been produced. Additional old data is being interpreted to provide better coverage of the feature.

COMMITMENT YET TO BE FULFILLED.

Copies of all maps have been filed with the Department of Mines.

As part of the continued evaluation proposed for the first part of the sixth permit year these maps will be revised to incorporate more of the older survey data and after further consideration of the velocity problems known to occur.

Union Texas has traded approximately 1,000 line km of seismic data for a similar amount of data on Phillips Vic P/18 permit and Shell's Vic P/19 permit. Acquired data includes final stack and time migrated seismic sections, velocity surveys and shot point location maps. This data is in the Union Texas Melbourne office. It has been used to tie wells to the Vic P/12 and T/13P interpretation and put the permit into a more regional perspective.

COMMITMENT FULFILLED.

A similar trade has been negotiated with Aquitaine for data in Vic P/17.

B. Geological

- (i) Digitized data has been acquired for a total of 79 wells throughout the basin. Union Texas had digitized logs for 44 wells and data from a further 35 wells was acquired from Ampol. This has provided the facility for playback of correlation logs on a variety of common scales.

Using the acquired well data six regional stratigraphic correlation sections have been constructed giving basin-wide coverage. Fifty-four wells have been lithologically correlated in four E.W. and two N.S. cross-sections. These results have been combined with the previously acquired age - determinations available for thirty-seven of the subject wells to give lithologic and chronostratigraphic correlations on the same sections.

COMMITMENT FULFILLED

Following is a list of the wells for which Union Texas has data on magnetic tape. The data consists of gamma ray and sonic for each well unless noted otherwise. The depths indicate the top of the log interval digitized.

Albatross-1	2180'	Kingfish-6	7500'
Barracouta-3	3450'	Mackerel-2	7450'
Bluebone-1	1600'	Mackerel-3	7700'
		(Gamma Ray only)	
Bream-2	5450'		
Cobia-2	7700'	Mackerel-4	7650'
Cod-1	6100'	Marlin-2	4600'
Emperor-1	4850'	Marlin-3	4650'
Flounder-2	6800'	Marlin-A6	4550'
(Sonic only)		(Gamma Ray only)	
Flounder-3	6400'	Mullet-1	2150'
		(Sonic only)	
Flounder-4	6150'		
(Sonic only)			
Flounder-5	6200'	Opah-1	7750'
Fortescue-2	7790'	Sailfish-1	900'
Fortescue-3	7870'	Snapper-2	3800'
Fortescue-4	7630'	Snapper-3	4000'
Gannet-1	2150'	Sunfish-1	5350'
Groper-1	2950'	Swordfish-1	6450'
Halibut, W-1	7550'	Tailor-1	7700'
Hammerhead-1	3900'	Threadfin-1	7710'
Helios-1	8370'	Trevally-1	6250'
Kingfish-2	7250'	Tuna-2	4250'
		(Sonic only)	
Kingfish-4	7250'	Tuna-3	4250'
Kingfish-5	7500'	Turrun-1	6300'
(Sonic only)		Turrun-2	4950'
		Yellowtail-1	7790'

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- (ii) To enable a paleo-environmental interpretation of available well data, Union Texas Australia commissioned the services of Paltech Pty Ltd of Sydney to prepare a biostratigraphic, palynostratigraphic and paleo-environmental analysis of 51 wells. This study has been completed and final reports have been submitted to the Department of Mines.

COMMITMENT FULFILLED.

- (iii) Construction of detailed paleographic maps is in progress. This study integrates results from the completed regional cross-sections and the age determinations/paleo-environment study.

COMMITMENT YET TO BE FULFILLED.

- (iv) Structure and isopach maps have been produced at several stratigraphic levels over the area of T/13P. The seismic interpretation and mapping displays the structural elements of the area, and the relationship between the Southern Platform, the Pisces sub-basin and the Deep Gippsland Basin.

COMMITMENT FULFILLED.

- (v) Gearhart Services Ltd was contracted to conduct a complete geochemical analysis of approximately 200 samples from 10 wells located in or near the permit area. The study included total pyrolysis analysis (including total organic carbon), vitrinite reflectance, spore coloration thermal maturity index and estimation of kerogen type. The 10 wells in the study were :-

Barracouta-1
Halibut-1
Hapuku-1
Kingfish-1
Moray-1
Perch-1
Pike-1
Pisces-1
Schnapper-1
Tuna-1

This study has been completed. A final report was received in January 1984, and a copy submitted to the Department of Mines.

COMMITMENT FULFILLED.

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- (vi) Further geochemical analyses of samples from Pisces-1 have been conducted as part of (v) above.

COMMITMENT FULFILLED.

- (viii) During the Fourth Quarter of 1982 Union Texas negotiated with Shell Australia for a trade of well data between Pisces No. 1 in Vic P/12 and Shell's Hammerhead No. 1 in Vic P/19. The Trade Agreement was signed on January 11, 1983. These data are presently in Union Texas' Melbourne office.

During the First Quarter of 1983, Union Texas agreed with Phillips Australia to trade Pisces No. 1 for Phillips' Helios No. 1 in Vic P/18. This exchange of data has been consummated and copies of all the information is presently in Union Texas' Melbourne Office.

An exchange of well information between Australian Aquitaine Petroleum Pty Limited and Union Texas was finalised in the Second Quarter of 1983. All information from Aquitaine's Edina No. 1 located in Vic P/17 was exchanged for Pisces No. 1 data. The Edina logs and reports are now in Union Texas' Melbourne office.

COMMITMENT FULFILLED.

- (viii) The determination of the distribution of play types recognised in the Gippsland Basin is still in progress. This work involves the integration of results from the various geological studies with the geophysical interpretation.

COMMITMENT YET TO BE FULFILLED.

- (ix) The extension of regional concepts/play types to other areas of the Gippsland Basin is a product of the other studies being conducted. Work on this is continuing.

COMMITMENT YET TO BE FULFILLED.

An interim report was prepared on the geological studies completed to date. The report contains the six regional cross-sections and discusses the geology of the basin with references to the results from the age determinations/paleoenvironment study and the geochemical study.

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A copy of this report has been filed with the Department of Mines.

2.4 REVIEW OF LEADS

A revised inventory of leads/prospects will be compiled on completion of the further evaluation proposed for the first part of the sixth permit year.

3.0 SUMMARY OF EXPENDITURES

Listed below are the expenditures for the Fifth Permit Year (April 4th 1983 - April 3rd 1984) in T/13P (in Australian dollars).

Description.	2nd,3rd,4th Quarter'83	1st Quarter 1984	Total for 5th Permit Year
Warehouse Rentals	449.56		449.56
Temp.Office Employees	323.88		323.88
Travel Expense	1,157.56		1,157.56
Freight,Hauling & Post	1,354.27	3,654.42	5,008.69
Law Dept,Expense Ext.	104.71	242.40	347.11
Contract Office Services	543.09	1,492.54	2,035.63
Communication	1,880.44	939.87	2,820.31
Office Supplies	61.19	198.49	259.68
Maps,Logs & Reproduction	2,586.05	12,930.29	15,516.34
Recording & other Services	49.18	91.07	140.25
Operating Services, Contract		2,348.63	2,348.63
Office Rentals	1,579.89	2,581.44	4,161.33
Entertainment	35.33	(39.30)	(3.97)
Foreign Travel	2,391.39		2,391.39
Head Office Direct Charges	27,570.92	5,875.47	33,446.39
Regional Office Allocation	29,044.69	2,965.90	32,010.59
Head Office Travel	2,407.46	2,712.84	5,120.30
Rental Storage Space	701.35	702.83	1,404.18
Subscriptions		10.73	10.73
Rental Expat.Residence	1,668.43		1,668.43
Utilities Expat. Residence	166.63	50.96	217.59
Rental Building	445.31		445.31
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Sub-Total	74,521.33	36,758.58	111,279.91
Seismic Purchase Geophysical,Geological Studies	126,656.13	10,000.00 39,989.45	10,000.00 166,645.58
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Sub-Total	126,656.13	49,989.45	176,645.58
=====			
TOTAL T/13P EXPENDITURES	201,177.46	86,748.03	287,925.49

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UNION TEXAS AUSTRALIA INCORPORATED
FIFTH YEAR - FIRST QUARTER (TO JULY 2, 1983)
PETROLEUM EXPLORATION PERMIT T13P
OFFSHORE GIPPSLAND BASIN

PART 2.

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C O N T E N T S

1. Administration
2. Geological and Geophysical Studies
 - 2.1 Introduction
 - 2.2 1983 Work Program
 - 2.3 1983 Work Program Progress
 - 2.4 Review of Prospects/Leads
3. Geophysical Operations
4. Summary of Expenditures for Fifth Year-First Quarter

1. ADMINISTRATION

The interests of the permittees and farminees in Permit T13P remains:

<u>Company</u>	<u>Interest</u>
Union Texas	10.959%
Cultus	10.274%
Ampol	8.219%
CRA	8.219%
York	4.795%
Metramar	4.795%
Sovereign	2.739%
Meridian, Pan Pacific, Ocita and Valiant	50%

On January 13, 1983 the Director of Mines advised that the Designed Authority had approved the variation of the Work Program by Otter Exploration N.L. in their application of December 15, 1982. As a result of that application and approval, an extensive geological and geophysical study was approved as the Fifth Year Work Program and the drilling of two exploratory wells was deferred until the Sixth Year of the Permit.

In February 1983, the Reserve Bank advised that it had no objection to the completion of the Heads of Agreement under which a consortium, lead by Union Texas Australia, would undertake the Fifth Year Work Program to earn a 50 percent interest in the Permit and an option to earn an additional 25 percent by drilling one well. The Foreign Investment Review Board also approved the Heads of the Agreement in March, 1983.

1. ADMINISTRATION (Continued)

Having agreed to assume Operatorship of the Permit, Union Texas Australia submitted on February 2, 1983, an application to conduct the 200 kilometer Geophysical Survey (seismic and magnetics) which was part of the Fifth Year Work Program. Approval to conduct the Survey was given by the Director on March 17, 1983.

2. GEOLOGICAL AND GEOPHYSICAL STUDIES

2.1 INTRODUCTION

On December 15, 1982, Union Texas Australia, acting on behalf of its Joint Venture Partners and acting as Representative for Otter Petroleum and Meridian Oil, submitted to the Tasmanian Mines Department in Hobart and the Department of National Development in Canberra an Application for a Variation of the Fifth Year Work Program for Permit T13P. The submission requested that the two exploration wells contemplated in the original Permit Work Program for the Fifth Year be deferred until the Sixth Year and that a comprehensive geological and geophysical study be substituted.

The Union Texas Group presented detailed technical reasoning in an attempt to obtain approval for the variation of the Work Program. In essence, it was argued that the understanding to be gained from an extensive Geological and Geophysical Program would surpass that which would be gained by the drilling of a single well. Additionally, a similar detailed study was proposed in the immediately adjacent Permit Vic. P12 wherein leads had been identified which could be extrapolated to Permit T13P. It was felt that such an extensive evaluation was a logical step in an integrated Exploration Program which would lead to selection of more optimally situated well locations for future drilling.

Otter Petroleum was notified of the requisition approval of the variance of the Fifth Year Work Program by telex dated January 13, 1983.

2.2 1983 WORK PROGRAM

A) Geophysical

Briefly, the 1983 Work Program incorporated the following:

- i) The proposed Geophysical Program involved the acquisition of 200 line kilometers of high resolution seismic data and magnetics. Interpretation of the 1983 Survey and integration with previous seismic data and seismic trade data will constitute a major part of the proposed Geophysical Program for 1983. Interpretation will include structural mapping, seismic stratigraphy studies and isopach studies.
- ii) Interpretation of magnetic data acquired in conjunction with the 1983 Seismic Survey. The magnetic data is considered essential in order to gain an understanding of basement involved plays which have been mapped over shallow basement areas in the Western Part of T13P and also top Latrobe structures which are developed as drape over basement highs in the Eastern Part of Permit T13P.

B) Geological

The proposed 1983 Geological Program, as submitted in the Fifth Year Work Program Variation Application is intended to include the following:

- i) Digitization of all available electric logs from wells drilled in the vicinity of T13P and to conduct detailed geological well correlations using the logs generated from the Digitization Program. This will enable determination of the Regional Development of the Gippsland Basin, timing of various tectonic events, and also to gain a better understanding of the distribution and inter-relationship of reservoir, source and seal.

- ii) Paleo-environmental interpretation of all available well data.
- iii) Construction of detailed paleo-structural analysis utilizing all available information.
- iv) Geochemical studies of cuttings available from wells drilled in the vicinity of T13P in order to investigate the presence of the source rock area, the type and distribution of organic material, and to compare this with geochemical results obtained from the Union Texas Pisces No. 1.
- v) Trading of well data from other permits for the Pisces No. 1. well data. Incorporation of all such data with data acquired in T13P.

2.3 1983 WORK PROGRAM PROGRESS

A) Geophysical

- i) During late March-early April 1983, 236 kilometers of high resolution seismic data were shot by Geophysical Service Incorporated utilizing their Eugene McDermott II shooting and recording boat. The T13P Geophysical Survey (seismic and magnetics) is designated GUT-83P. All data should be fully processed and forwarded to Union Texas in Melbourne no later than August 15, 1983.
- ii) The magnetometer data recorded in conjunction with the 1983 Seismic Program has been interpreted by Exploration Consultants Limited of Perth. Final maps and report should be forwarded to Union Texas in Melbourne no later than August 7, 1983.

iii) During the Fourth Quarter of 1982 discussions were opened with the Phillips Australian Oil company, as operator of Permit Vic P/18, for a trade of seismic data. After attainment of the necessary approvals from all joint venture partners, the trade took place in mid January 1983. The data trade involved the exchange of 614. 125 line kilometers of final stack sections, 274 line kilometers of time migrated seismic sections, velocity survey, and shot point base maps. These data are now in the Union Texas' Melbourne office.

B) Geological

- i) Geophysical Service Incorporated in Singapore has completed the digitization of 44 well logs in the vicinity of Vic P/12. Tapes and the resultant processed logs from these wells are now in Melbourne. Also, discussions are in progress to acquire tapes of 35 additional digitized wells from Australian Aquitaine Petroleum Pty. Limited.
- ii) To enable a paleo-environmental interpretation of available well data, Union Texas Australia commissioned the services of Paltech Pty. Ltd. of Sydney to prepare a biostratigraphic, palynostratigraphic and paleo-environmental analysis of 51 wells. This study has been completed and final reports are now in Melbourne.
- iii) During the Fourth Quarter of 1982 Union Texas negotiated with Shell Australia for a trade of well data between Pisces No. 1 in Vic P/12 and Shell's Hammerhead No. 1 in Vic P/19. The Trade Agreement was signed on January 11, 1983. Copies of all information received in this exchange of data is being forwarded from Union Texas in Houston to Union Texas Australia.

- iv) During the First Quarter of 1983, Union Texas agreed with Phillips Australia to trade Pisces No. 1 for Phillips' Helios No. 1 in Vic P/18. This exchange of data has been consummated and copies of all information acquired from Phillips is being forwarded to Union Texas in Melbourne.
- v) An exchange of well information between Australian Aquitaine Petroleum Pty. Limited and Union Texas was finalised in the Second Quarter of 1983. All information from Aquitaine's Edina No. 1 located in Vic. P/17 was exchanged for Pisces No. 1. data. The Edina logs and report are now in Union Texas' Melbourne Office.
- vi) Further geochemical studies of cutting and sidewall cores from the Pisces No. 1, including pyrolysis studies, will begin the first week of August, 1983. This study will be conducted by Gearhart Geodata Services Ltd. Gearhart is presently installing equipment in Sale which should be operational sometime during the week of August 1, 1983. Sidewall cores from selected intervals have been forwarded to Gearhart in Sale.
- vii) Geochemical studies from selected intervals in 10 wells will begin the week of August 1, 1983. The study will include total organic carbon, vitrinite reflectance, spore coloration, and kerogen typing. Cutting samples from 9 of the 10 geographically distributed wells will be borrowed from the Oil and Gas Division of the Victorian Department of Minerals and Energy. The ten wells to be included in the geochemical study are Tuna-1, Pike-1, Barracouta-1, Snapper-1, Kingfish-1, Moray-1, Hapuku-1, Halibut-1, Perch-1, and Pisces-1. The study will be performed by Gearhart Geodata Services Ltd in Sale.

2.4 Review of Prospects/Leads

The extensive geological and geophysical work program which is being undertaken in both Permit T13P and its immediate northerly neighbor, Permit Vic P/12, is designed to identify leads present in those blocks with a view to maturing as many leads as possible into mature drillable prospects.

At this point in time, two distinctly different play types recognised in Vic P/12 have been indicated as extending southwards into Permit T13P:

i) Top Latrobe Structure (Scorpio Lead)

The Scorpio lead was formed by drape of Latrobe Valley Group sediments across an old basement high. It is analagous to similar type leads identified in Permit Vic P/12 though it is present in somewhat shallower water. The Scorpio lead has well-defined amplitude anomalies and "flat-spots" associated with it. The GUT-83P survey has resulted in further data acquisition over this structure.

ii) Intra-Miocene Plays (Gemini Trend)

The Gemini Trend occurs as a seismically defined isochron thick within the Oligo-Miocene Lakes Entrance Formation and is considered to represent a shelfal sand complex.

The trap associated with this trend involves structural reversal to the north and east, combined with stratigraphic truncation or facies change to the west and south. Additionally, a series of four-way dip-closed structures are superimposed upon the sand complex.

ii) Continued

The GC81A survey, which was shot by the Cultus Group confirmed that the "Gemini Trend" previously recognised in Permit Vic P/12, did extend into T13P. This extension will be further evaluated by GUT-83P survey.

3. GEOPHYSICAL OPERATIONS

Tenders for the T13P Seismic and Magnetometer Survey were called for in January 1983. Following an analysis of bids, contracts for the acquisition and processing of the seismic data were awarded to Geophysical Service Incorporated.

A submission for the UT83 Geophysical Survey was presented to the Tasmanian Mines Department on December 15, 1982.

The survey commenced on March 29, 1983 at 1013 hours and was completed on April 5, 1983. The survey was shot by Geophysical Services Incorporated party 2931 using the M/V Eugene McDermott II Seismic Vessel. Shooting parameters included 4075 cubic inch air guns, 240 channels, and a 3600 meter streamer cable resulting in 60 fold coverage. Magnetometer data were recorded throughout the survey navigation was provided by an Integrated Syledis/Argo System. A total of fifteen seismic lines were shot for a total of 236.04 line kilometers of data.

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REP. No. 10,302/83				

UNION TEXAS AUSTRALIA INCORPORATED
FIFTH YEAR - SECOND QUARTER (TO OCTOBER 2, 1983)
PETROLEUM EXPLORATION PERMIT T13P
OFFSHORE GIPPSLAND BASIN
PART 3.

T13P Part 17

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C O N T E N T S

1. Administration
2. Geological and Geophysical Studies
 - 2.1 Introduction
 - 2.2 1983 Work Program
 - 2.3 1983 Work Program Progress
 - 2.4 Review of Prospects/Leads
3. Geophysical Operations
4. Summary of Expenditures for Fifth Year - Second Quarter

1. ADMINISTRATION

The interests of the permittees and farminees in Permit T13P remains:

<u>Company</u>	<u>Interest</u>
Union Texas	10.959%
Cultus	10.274%
Ampol	8.219%
CRA	8.219%
York	4.795%
Metramar	4.795%
Sovereign	2.739%
Meridian, Pan Pacific, Ocita and Valiant	50%

On January 13, 1983 the Director of Mines advised that the Designed Authority had approved the variation of the Work Program by Otter Exploration N.L. in their application of December 15, 1982. As a result of that application and approval, an extensive geological and geophysical study was approved as the Fifth Year Work Program and the drilling of two exploratory wells was deferred until the Sixth Year of the Permit.

In February 1983, the Reserve Bank advised that it had no objection to the completion of the Heads of Agreement under which a consortium, lead by Union Texas Australia, would undertake the Fifth Year Work Program to earn a 50 percent interest in the Permit and an option to earn an additional 25 percent by drilling one well. The Foreign Investment Review Board also approved the Heads of the Agreement in March, 1983.

1. ADMINISTRATION (Continued)

Having agreed to assume Operatorship of the Permit, Union Texas Australia submitted on February 2, 1983, an application to conduct the 200 kilometer Geophysical Survey (seismic and magnetics) which was part of the Fifth Year Work Program. Approval to conduct the Survey was given by the Director on March 17, 1983.

2. GEOLOGICAL AND GEOPHYSICAL STUDIES

2.1 INTRODUCTION

On December 15, 1982, Union Texas Australia, acting on behalf of its Joint Venture Partners and acting as Representative for Otter Petroleum and Meridian Oil, submitted to the Tasmanian Mines Department in Hobart and the Department of National Development in Canberra and Application for a Variation of the Fifth Year Work Program for Permit T13P. The submission requested that the two exploration wells contemplated in the original Permit Work Program for the Fifth Year be deferred until the Sixth Year and that a comprehensive geological and geophysical study be substituted.

The Union Texas Group presented detailed technical reasoning in an attempt to obtain approval for the variation of the Work Program. In essence, it was argued that the understanding to be gained from an extensive Geological and Geophysical Program would surpass that which would be gained by the drilling of a single well. Additionally, a similar detailed study was proposed in the immediately adjacent Permit Vic. P12 wherein leads had been identified which could be extrapolated to Permit T13P. It was felt that such an extensive evaluation was a logical step in an integrated Exploration Program which would lead to selection of more optimally situated well locations for future drilling.

2.1 INTRODUCTION (Continued)

Otter Petroleum was notified of the requisition approval of the variance of the Fifth Year Work Program by telex dated January 13, 1983.

2.2 1983 WORK PROGRAM

A) Geophysical

Briefly, the 1983 Work Program incorporated the following:

- i) The proposed Geophysical Program involved the acquisition of 200 line kilometers of high resolution seismic data and magnetics. Interpretation of the 1983 Survey and integration with previous seismic data and seismic trace data will constitute a major part of the proposed Geophysical Program for 1983. Interpretation will include structural mapping, seismic stratigraphy studies and isopach studies.

- ii) Interpretation of magnetic data acquired in conjunction with the 1983 Seismic Survey. The magnetic data is considered essential in order to gain an understanding of basement involved plays which have been mapped over shallow basement areas in the Western Part of T13P and also top Latrobe structures which are developed as drape over basement highs in the Eastern Part of Permit T13P.

B) Geological

The proposed 1983 Geological Program, as submitted in the Fifth Year Work Program Variation Application is intended to include the following:

- i) Digitization of all available electric logs from wells drilled in the vicinity of T13P and to conduct detailed geological well correlations using the logs generated from the Digitization Program. This will enable determination of the Regional Development of

2.2 1983 WORK PROGRAM (Continued)B) Geological

i) Continued

the Gippsland Basin, timing of various tectonic events, and also to gain a better understanding of the distribution and inter-relationship of reservoir, source and seal.

ii) Paleo-environmental interpretation of all available well data.

iii) Construction of detailed paleo-structural analysis utilizing all available information.

iv) Geochemical studies of cuttings available from wells drilled in the vicinity of T13P in order to investigate the presence of the source rock area, the type and distribution of organic material, and to compare this with geochemical results obtained from the Union Texas Pisces No. 1.

v) Trading of well data from other permits for the Pisces No. 1 well data. Incorporation of all such data with data acquired in T13P.

2.3 1983 WORK PROGRAM PROGRESSA) Geophysical

i) During late March-early April 1983, 236 kilometers of high resolution seismic data were shot by Geophysical Service Incorporated utilizing their Eugene McDermott II shooting and recording boat. The T13P Geophysical Survey (seismic and magnetics) is designated GUT-83P. Geophysical Service Incorporated in Sydney processed the data 30 fold utilizing time variant filter and time variant scaling. All Partners and the

2.3 1983 WORK PROGRAM PROGRESS (Continued)A) Geophysical

i) Continued

Tasmanian Department of Mines have been provided copies of the data and shot point location maps. The original seismic sections and base maps are stored in Union Texas' Melbourne Office. An interpretation of the data is in progress. Geophysical Service Incorporated in Sydney is presently in the process of migrating the entire 236 kilometers of data. Estimated completion date is November 15, 1983.

ii) The magnetometer data recorded in conjunction with the 1983 Seismic Program has been interpreted by Exploration Consultants Limited of Perth. Final maps and report should be forwarded to Union Texas in Melbourne no later than November 15, 1983.

iii) During the Fourth Quarter of 1982 discussions were opened with the Phillips Australian Oil company, as operator of Permit Vic P/18, for a trade of seismic data. After attainment of the necessary approvals from all joint venture partners, the trade took place in mid-January 1983. The data trade involved the exchange of 614.125 line kilometers of final stack sections, 274 line kilometers of time migrated seismic sections, velocity survey, and shot point base maps. These data are now in the Union Texas' Melbourne office.

B) Geological

i) Geophysical Service Incorporated in Singapore has completed the digitization of 44 well logs in the vicinity of Vic P/12. Tapes and the resultant processed logs from these wells are now in Melbourne.

ii) To enable a paleo-environmental interpretation of available well data, Union Texas Australia commissioned the services of Paltech

2.3 1983 WORK PROGRAM PROGRESS (Continued)B) Geological

ii) Continued

Pty. Ltd., of Sydney to prepare a biostratigraphic, palynostratigraphic and paleo-environmental analysis of 51 wells. This study has been completed and final reports have been submitted to partners and the Tasmanian Department of Mines.

iii) During the Fourth Quarter of 1982 Union Texas negotiated with Shell Australia for a trade of well data between Pisces No. 1 in Vic P/12 and Shell's Hammerhead No. 1 in Vic P/19. The Trade Agreement was signed on January 11, 1983. Copies of all information received in this exchange of data is being forward from Union Texas in Houston to Union Texas Australia.

iv) During the First Quarter of 1983 Union Texas agreed with Phillips Australia to trade Pisces No. 1 for Phillips' Helios No. 1 in Vic P/18. This exchange of data has been consummated and copies of all information acquired from Phillips is being forwarded to Union Texas in Melbourne.

v) An exchange of well information between Australian Aquitaine Petroleum Pty. Limited and Union Texas was finalised in the Second Quarter of 1983. All information from Aquitaine's Edina No. 1 located in Vic. P/17 was exchanged for Pisces No.1 data. The Edina logs and report are now in Union Texas' Melbourne Office.

vi) Geochemical studies from selected intervals in 10 wells is in progress by Gearhart Strat Services in Sale. The study includes total organic carbon, vitrinite reflectance, spore coloration/thermal maturing index, kerogen typing, and pyrolysis analysis. Cutting samples from 9 of the 10 geographically distributed wells have been

2.3 1983 WORK PROGRAM PROGRESS (Continued)

B) Geological

vi) Continued

provided by the Oil and Gas Division of the Victorian Department of Minerals and Energy. The ten wells in the study are Tuna-1, Pike-1, Barracouta-1, Snapper-1, Kingfish-1, Moray-1, Hapuku-1, Halibut-1, Perch-1, and Pisces-1. Estimated completion of the study is later part of November 1983.

2.4 Review of Prospects/Leads

The extensive geological and geophysical work program which is being undertaken in both Permit T13P and its immediate northerly neighbor, Permit Vic P/12, is designed to identify leads present in those blocks with a view to maturing as many leads as possible into mature drillable prospects.

At this point in time, two distinctly different play types recognised in Vic P/12 have been indicated as extending southwards into Permit T13P:

i) Top Latrobe Structure (Scorpio Lead)

The Scorpio lead was formed by drape of Latrobe Valley Group sediments across an old basement high. It is analagous to similar type leads identified in Permit Vic P/12 though it is present in somewhat shallower water. The Scorpio lead has well-defined amplitude anomalies and "flat-spots" associated with it. The GUT-83P survey has resulted in further data acquisition over this structure.

2.4 Review of Prospects/Leads (Continued)

ii) Intra-Miocene Plays (Gemini Trend)

The Gemini Trend occurs as a seismically defined isochron thick within the Oligo-Miocene Lakes Entrance Formation and is considered to represent a shelfal sand complex.

The trap associated with this trend involves structural reversal to the north and east, combined with stratigraphic truncation or facies change to the west and south. Additionally, a series of four-way dip-closed structures are superimposed upon the sand complex.

The GC81A survey, which was shot by the Cultus Group confirmed the the "Gemini Trend" previously recognised in Permit Vic P/12, did extend into T13P. This extension will be further evaluated by GUT-83P survey.

3. GEOPHYSICAL OPERATIONS

Tenders for the T13P Seismic and Magnetometer Survey were called for in January 1983. Following an analysis of bids, contracts for the acquisition and processing of the seismic data were awarded to Geophysical Service Incorporated.

A submission for the UT83 Geophysical Survey was presented to the Tasmanian Mines Department on December 15, 1982.

The survey commenced on March 29, 1983 at 1013 hours and was completed on April 5, 1983. The survey was shot by Geophysical Services Incorporated party 2931 using the M/V Eugene McDermott II Seismic Vessel. Shooting parameters included 4075 cubic inch air guns, 240 channels, and a 3600 meter streamer cable resulting in 60 fold coverage. Magnetometer data were recorded throughout the survey navigation was provided by an integrated Syledis/Argo System, A total of fifteen seismic lines were shot for a total of 236.04 line kilometers of data.

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UNION TEXAS AUSTRALIA INC.

FIFTH YEAR - THIRD QUARTER (TO JANUARY 4TH, 1984)

PETROLEUM EXPLORATION PERMIT T/13P

OFFSHORE GIPPSLAND BASIN

AUSTRALIA

PART 4.

T/13P Part 21

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CONTENTS

1. ADMINISTRATION
2. GEOPHYSICAL AND GEOLOGICAL STUDIES
3. SUMMARY OF EXPENDITURES

1. ADMINISTRATION

The interests in Permit T/13P are as follows:-

<u>Company</u>	<u>Interest</u>
Union Texas (Operator)	13.973%
Ampol Exploration	10.479%
CRA Exploration	10.479%
Cultus Pacific	5.137%
Metramar	4.795%
Sovereign	2.739%
York	2.398%
Meridian	20.000%
Pan Pacific	16.667%
Valiant Consolidated	8.083%
Ocita	5.250%

During the quarter work has continued on the fifth year variant work program which was approved by the designated authority on January 13th, 1984. The program involved extensive geophysical and geological studies, and deferral of the drilling of two exploratory wells until the sixth permit year.

Union Texas has received from Pan Pacific a large amount of data on T/13P acquired by previous permit holders. The data transferred includes Magellan and Otter data, i.e. original and reprocessed Magellan seismic lines, reports, base maps etc., and the Flinders seismic survey data.

Much of this data has not previously been filed with the Department of Mines. Union Texas is in the process of doing this and will complete the transfer of data during the first quarter of 1984.

Union Texas has taken full responsibility for the safe keeping of any data retained for use in the continuing evaluation of T/13P and will transfer the data to the Tasmanian Department of Mines upon relinquishment of the permit.

2. GEOPHYSICAL AND GEOLOGICAL STUDIES

The 1983 Work Program involves extensive geophysical and geological studies which will greatly assist in the interpretation of leads currently identified and add significantly to the understanding of the regional geology and new prospect generation concepts throughout the Gippsland basin.

The following summarises the geophysical and geological activities conducted during the quarter.

2. GEOPHYSICAL AND GEOLOGICAL STUDIES (Continued)A. Geophysical

- i) Acquisition of the 1983 GUT 83A seismic program was completed on April 9th, 1983. During November, Geophysical Services Incorporated in Sydney completed migration of the entire 236 line km of data to complete processing. Copies of all data have been lodged with the Department of Mines.

Interpretation is continuing using the recent and older data. Picked horizons include Water Bottom, Intra-Oligocene, Top Latrobe, Campanian and Basement.

- ii) The magnetometer data recorded in conjunction with the 1983 seismic Program has been interpreted by Exploration Consultants of Perth. Final maps and report were received in November and copies sent to the Department of Mines. Additional interpretation is being done by Union Texas in Houston.

B. Geological

- i) Digitisation of logs from 44 wells in the Gippsland Basin has been completed.
- ii) To enable a paleo-environmental interpretation of available well data, Union Texas commissioned Paltech Pty. Ltd. of Sydney to conduct a biostratigraphic, palynostratigraphic and paleo-environmental analysis of 51 wells. This study was completed and copies of the reports were filed with the Department of Mines in December.
- iii) Regional well correlations incorporating 38 wells have been partially completed resulting in the construction of four cross-sections traversing the Gippsland Basin. Work on two additional cross-sections is in progress. These studies are integrating results from the geochemical studies, which are in progress, and paleoenvironment/age determination studies completed earlier.
- iv) Geochemical studies on samples from selected intervals in 10 wells is in progress by Gearhart Pty. Ltd. The study includes total organic carbon, vitrinite reflectance, spore colouration/thermal maturation index, kerogen typing and pyrolysis analysis. The ten wells in the study are:- Tuna-1, Pike-1, Barracouta-1, Snapper-1, Kingfish-1, Moray-1, Hapuku-1, Halibut-1, Perch-1, and Pisces-1. The study will be completed in early January, 1984.

3. SUMMARY OF EXPENDITURES

Listed are the Fourth Quarter 1983 T/13P expenditures for Union Texas Australia (expressed in Australian dollars):

<u>Description</u>	<u>4th Qtr.</u>	<u>Y. to D. 1983 Incl. 4th Qtr.</u>
Warehouse Rentals	302.77	449.56
Temp. Office Employees		323.88
Travel Expense	107.93	1,157.56
Freight, Hauling & Post.	1,069.20	1,429.97
Law Dept. Exp. External		104.71
Contract Office Services	543.09	543.09
Communication		2,356.67
Office supplies		61.19
Maps, Logs, and Reprod.	936.87	4,487.64
Recording and other serv.	27.55	49.18
Office Rentals		1,579.89
Entertainment	35.33	35.33
Foreign Travel		3,024.26
Head Off. Direct Chrges.	10,142.17	29,132.58
Regional Off. Alloc.	885.40	172,443.28
Head Office Travel		2,407.46
Rental Storage Space	587.20	701.35
Rental-Expat Res.	1,003.72	1,668.43
Utilities-Expat Res.	166.63	166.63
Rental Building	150.81	445.31
Total Expense	15,958.67	222,567.97
Seismic and Geol. Total Exp.	19,253.67	250,101.94

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UNION TEXAS AUSTRALIA INC.

FIFTH YEAR - FOURTH QUARTER (TO APRIL 4TH, 1984)

PETROLEUM EXPLORATION PERMIT T/13P

OFFSHORE GIPPSLAND BASIN

AUSTRALIA

PART 5.

T/13 P Part 2E

CONTENTS

1. ADMINISTRATION
2. GEOPHYSICAL AND GEOLOGICAL STUDIES
3. SUMMARY OF EXPENDITURES

-1-

1. ADMINISTRATION

The interests in Permit T/13P are as follows:

<u>Company</u>	<u>Interest</u>
Union Texas (Operator)	13.973%
Ampol Exploration	10.479%
CRA Exploration	10.479%
Cultus Pacific	5.137%
Metramar	4.795%
Sovereign	2.739%
York	2.398%
Meridian	20.000%
Pan Pacific	16.667%
Valiant Consolidated	8.083%
Ocita	5.250%

During the quarter work has continued on the fifth year variant work program which was approved by the designated authority on January 13th, 1983. The program involved extensive geophysical and geological studies, and deferral of the drilling of two exploratory wells until the sixth permit year.

On March 14th, 1984 Union Texas requested approval from the Director of the Tasmanian Department of Mines of a proposed work program for the sixth permit year of petroleum exploration Permit T/13P. The program was designed to allow Union Texas to further evaluate technical data acquired during the fifth permit year with a view to maturing at least two drillable prospects for drilling in the latter half of the sixth permit year.

A copy of the sixth year program is attached.

The work program split the sixth permit year into two stages. During the initial stage (April 4th - October 3rd, 1984) the analytical review of all remaining leads would be conducted. Should this review mature at least two drillable prospects they would be drilled during the second stage (October 4th, 1984 - April 3rd, 1985). Should the review fail to mature drillable prospects the group would be prepared to propose additional work or surrender the permit by October 4th, 1984.

The Director granted approval of the program on April 3rd, 1984.

2. GEOLOGICAL AND GEOPHYSICAL STUDIES

The fifth year Work Program involves geophysical and geological studies which will greatly assist in the interpretation of leads currently identified and add significantly to the understanding of the regional geology and new prospect generation concepts throughout the Gippsland Basin.

The following summarises the geophysical and geological activities conducted during the quarter.

A. Geophysical

- i) Seismic interpretation continued using lines from 1983, '82, '81 and '80 surveys and some older data. Picked horizons include water bottom, intra-Oligocene, top Latrobe, Campanian and basement.

Preliminary copies of the following maps were submitted to the Department of Mines:-

- a) Two way time structure maps

1. Water bottom
2. Intra-Oligocene
3. Top Latrobe

- b) Depth structure maps

1. Water bottom
2. Intra-Oligocene
3. Top Latrobe

- c) Average velocity maps

1. Intra-Oligocene
2. Top Latrobe

Attempts have been made to pick an intra-Latrobe Campanian event in the northeast part of the block. Difficulties in picking may preclude the mapping of regional structure at this level. At best, mapping may only be possible over restricted areas.

Maps on basement and interval time and thickness maps will be produced shortly.

- ii) The magnetometer data recorded in conjunction with the 1983 seismic program was interpreted by Exploration Consultants Limited. Union Texas has continued the interpretation of this data, specifically with the aim of determining whether anomalies seen on seismic sections over the southern platform area are volcanic or sedimentary in nature.

As a further aid to the evaluation of these anomalies seismic modelling studies were conducted in an attempt to determine the lithology and fluid content of the features.

2. A. ii) Continued

This work was proposed as part of the work program for Stage 1 of the sixth permit year.

Detailed reports on these studies have been completed and submitted to the Department of Mines. The reports are titled as follows:-

1. "Gippsland Basin, Australia, Vic P/12, T/13P. Report on the Magnetic and Seismic Modelling of Intra-Latrobe Features" - J.D. Underwood, March 20, 1984.
2. "The evaluation of Magnetic Anomalies Over Anomalous Seismic Reflectors in a Portion of the Gippsland Basin, Offshore Southeastern Australia" - for Union Texas Petroleum by Aero Service Division, Western Geophysical Company of America, March, 1984.

2.2 Geological

- 1) Six regional stratigraphic correlation sections have been constructed giving base-wide coverage. Fifty-four wells have been lithologically correlated in four E-W and two N-S cross-sections. These results have been combined with the previously acquired age-determinations available for thirty-seven of the subject wells to give lithologic and chronostratigraphic correlations on the same sections.
- ii) The geochemical studies on samples from 10 wells was completed by Gearhart Pty. Ltd. The study included total organic carbon, vitrinite reflectance, spore colouration/thermal maturation index, kerogen typing and pyrolysis. The wells in the study were:- Tuna-1, Pike-1, Barracouta-1, Snapper-1, Kingfish-1, Moray-1, Hapuku-1, Halibut-1, Perch-1, and Pisces-1.

A report on this study was submitted to the Department of Mines.

- iii) An interim report was prepared on the geological studies completed to date. The report contains the six regional cross-sections and discusses the geology of the basin with references to the results from the age determinations/paleoenvironment study and the geochemical study.

A copy of this report has been filed with the Department of Mines.

- iv) Construction of detailed regional paleogeographic maps is in progress. This study integrates results from the previously completed regional cross-sections and the age determinations/paleoenvironment study.

3. SUMMARY OF EXPENDITURES

Listed below are the expenditures for the First Quarter of 1984 (Fourth Quarter of the Fifth Permit Year) in T/13P (in Australia dollars).

<u>Description</u>	<u>1st Qtr 1984</u>
Freight, Hauling & Post	3,654.42
Law Dept.,Expense Ext.	242.40
Contract Office Services	1,492.54
Communication	939.87
Office Supplies	198.49
Maps, Logs & Reproduction	12,930.29
Recording & Other Services	91.07
Operating Services, Contract	2,348.63
Office Rentals	2,581.44
Entertainment	(39.30)
Head Office Direct Charges	5,875.47
Regional Office Allocation	2,965.90
Head Office Travel	2,712.84
Rental Storage Space	702.83
Subscriptions	10.73
Utilities Expat.Residence	50.96
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Sub-Total	36,758.58
Seismic Purchase	10,000.00
Geophysical, Geological Studies	39,989.45
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Sub-Total	49,989.45
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TOTAL T13/P EXPENDITURES	86,748.03

PROPOSED SIXTH PERMIT YEAR WORK PROGRAMEXPLORATION PERMIT T/13PStage 1 (April 4, 1984 - October 3, 1984)

During the first six months of the sixth permit year, Union Texas will further evaluate technical data acquired during the fifth permit year with a view to maturing at least two drillable prospect locations for drilling in the latter half of the permit year. Specific objectives include:-

1. Detailed mapping of existing seismic data to accurately locate and define anomalies on the Southern shelf area.
2. Analytical evaluation of anomalies mapped on the shelf area to determine if they are simple anticlinal structures, sand deposits, reefs or basalt mounds.
3. Detailed evaluation of existing magnetic data to determine if the shelf anomalies reflect basalt mounds.
4. Conduct comprehensive velocity analysis and modelling of at least one of the shelf anomalies if magnetics indicated the structure to be other than basalt.
5. Conduct a feasibility study that would involve consideration of the potential inplace and recoverable reserve estimates.

Stage 2 (October 4, 1984 - April 3, 1985)

Commitment to Stage 2 of the work program would be contingent upon the results of the evaluation performed in Stage 1. If two or more drillable prospects are confirmed, two exploration wells would be drilled in the latter half of the permit year. If two or more drillable prospects are not confirmed, additional work would be recommended, or the permit would be surrendered.