THE NECESSITY FOR ESTABLISHMENT OF A SOPHISTICATED AUSTRALIAN PETROLEUM BANKING SYSTEM

by

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Introduction

Australia is very fortunate to be well endowed with significant energy resources such as gas, oil, coal and uranium. However, owing to world energy consumption patterns and unstable political climates, and despite the current short to medium term world glut of crude oil and price instability, petroleum exploration and production should continue to be extemely important especially to the non-Communist free world.

Few authorities dispute the assertion that Australia may have considerable undisclosed petroleum resources. These resources, once found, will serve no useful purpose unless they are developed expeditiously throughout the coming decade.

To exploit these discoveries, someone has to provide the funds, and internationally and externally to the oil companies, this function is being fulfilled by the Petroleum Banks, sometimes known as Energy Banks, particularly those based in the United States and the United Kingdom.

The purpose of this paper is to analyse whether it is necessary to develop a similar capability in the Australian environment and if so, to examine its degree of sophistication both in terms of financing techniques and demand should the utilisation of specialised expertise become readily available.

What is an Energy Bank?

Given the increasing interest in the petroleum industry both internationally and domestically and to keep pace with the rapid technological changes in the early 1980's specialist services will need to be developed by ambitious financial institutions in Australia who are seeking a direct involvement in the petroleum industry.

Cary Reich[1] indicated that the demand for petroleum engineers, geologists and geophysicists in the U.S.A., was the result of a new phenomenon which is now a most lucrative profit centre for the international bank. That concept is now known as *"Energy Banking"*, or taken to one of its logical extensions in Australia, Petroleum Banking.

With the 1973 Arab oil embargo and the resulting rise in fuel prices giving fresh impetus to energy resource exploration and development, U.S. banks suddenly found themselves in the midst of a financing bonanza.

Reich indicates that external financing by American oil, gas and coal companies increased from $1.5 billion in 1973 to $3.9 billion in 1974, and in 1978 to $9.4 billion. Before 1985, according to a projection by Bankers Trust, financing projections could be as as high as $16 billion a year. Chase Manhattan predicted that over the ten year period ending 1985, the international petroleum industry will have drawn $315 billion from external sources, $138 billion of which will be utilised by non U.S. companies.* It was ascertained that composite projects funded have risen from 80 projects in 1973 to over 275 projects in 1978.

With a stable political climate and reasonably attractive acreage for petroleum exploration in Australia, it is likely that a considerable amount of money could be available if local companies and domestic financial institutions seize the opportunity to familiarise themselves with the criteria that the international commercial banks and venture capital companies utilise in assessing projects associated with the petroleum industry.

In the U.S.A. very high growth rates in the banking area have been recorded by the Texas banks whose dramatic increases in profitability is closely related to

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* All projections in US$.

the expanding demands place on it by the local petroleum explorer, producer and service company.

The First City National Bank of Houston's energy portfolio has been growing at the rate of up to 40 per cent per annum; the petroleum and minerals portfolio for the Republic National Bank of Dallas expanded a cumulative 80 per cent over 3 years and in New York, Manufacturer Hanover's oil and gas loans were reported to have doubled in volume over a 5 year period.

Experience in the United States has influenced a growing number of banks around the world to become similarly involved in financing the petroleum industry. The development of the North Sea prompted two major British banks, the National Westminster and Barclays to establish energy departments. Natwest's department was established in 1972 when British Petroleum commenced production for the Forties Field.

In 1982, the Barclays Group now have 55 people available, comprising 12 specialists. Currently, for the North Sea alone, approximately £530 million sterling is exposed.

North Sea financing has also been launched by Norway's Den Norske Creditbank where in the past five years it has been involved in North Sea production and pipeline financing.

The international banks have not been alone in seizing the opportunity. Dillon Read, an investment bank in the U.S., expanded its energy department staff from 1 to 8 people in one year. The first Boston Project Unit handling Natural Resources projects, one of the foremost in its field, also experienced major demand for both its corporate services and access to its skilled personnel over the last 9 years. Morgan Grenfell and Morgan Stanley to mention but two investment bankers are well known in the Australian environment both in funding and advisory capacities.

The North Sea also spawned an energy oriented consortium bank, The International Energy Bank whose shareholders include the Republic National Bank of Dallas and Barclays, who have recently co-ordinated a $600 million package for Santos as part of the Cooper Basin Liquids Project.

Other countries were also eager to gain expertise from the Texas banks, who then instituted active training programmes for overseas correspondent banks. European and Japanese banks in particular, have taken advantage of these initiatives and are now starting to emerge rapidly as major forces in funding international resources projects.

In the U.S. the foreign impact is very clearly seen in Houston with 28 banks opening offices in the past 5 years. The Texas banks in turn use their established reputation to boost themselves internationally. Texas Commerce opened offices in Tokyo, Caracas and the Middle East and soon, Singapore. The Republic National Bank and the International Energy Bank played a major role in the financing of the Piper and Claymore Fields in the North Sea and are both well known in Australia in financing petroleum development projects. The First National Bank of Dallas has been a participant in many of the major North Sea financing operations over the last 5 years.

Although dwarfed by a relative comparison to the International Petroleum industry, there exists in the Australian environment, significant potential for enterprising financial institutions to develop their capabilities to service a growing domestic petroleum industry, which is now clearly, despite the recent collapse of the equity market, still in takeoff.

The initial question to answer is, *"Why does Australia need a sophisticated Petroleum Banking System"?*

Recently, an investigation of Australian financial institutions, was undertaken by the author to determine whether a specialised service for the petroleum industry was there currently and if not, was desirable or indeed necessary. Observations from that study suggest that some of the Australian trading banks, the Resources Bank (ARDB) and the AIDC now appear to be hastening to become actively involved in servicing the financial needs of the Australian Petroleum Industry.

The Resources Bank[2] for example, supply of funds to Natural Resources projects jumped 60 per cent to $160 million in 1981. The ARDB's 1981 annual report showed nearly a quarter of all loans approved since the banks inception in 1967 have been for oil, natural gas and petroleum projects.

However, the results of the study also suggest that the Australian financial institutions were experiencing a shortage of skilled financial analysts with prior practical industry experience in the petroleum industry. There appears to be even fewer Australian personnel who have had both technical experience from within the industry as well as a commercial background gleaned from the banking industry or other financial institutions, particularly from overseas. In comparison to skilled people available within the institutions to

service financing projects associated with the mining industry, the situation is still far from good but at least considerably better than that for attempting to service the petroleum industry. The results of the study also suggest:—

(1) The petroleum industry except for Bass Strait, the Cooper Basin and fields associated with North Rankin is not a mature production industry by international comparison. Additional large discoveries could justify the establishment by domestic institutions of a sophisticated infrastructure and the acquisition of personnel similar to the Houston banks. However, as the discoveries are relatively small and geographically spread by an international comparison, much of the funding to date for petroleum projects has been generated via the large international banks which utilise in most cases, a one or two man representative office who call where necessary, for additional expertise from head office. However, several of the large international banks such as Bank America, have now established a full capability locally, which may be the start of a new trend.

(2) A traditional justification until quite recently for lack of activity at the development stage in the local petroleum industry appears to have been that the sheer size of such projects and the huge capital requirements would preclude a large participation by Australian financial institutions. However, the domestic banks are now becoming very aggressive in attempting to participate actively as leaders rather than having been followers, up to even recent times. It is believed that the major reason for the Australian financial institutions have not taken a greater exposure into petroleum related projects is the inability to access personnnel who have the dual discipline, that is, a sound technical background gained from practical experience coupled with a sound commercial background obtained from working with financial institutions interpreting both financial and technical data, rather than a lack of capital base. It is also believed that the major trading banks in particular are endeavouring to rectify the situation now by attracting these skilled people.

(3) It is believed that the third reason why it has taken considerable time to generate more local support is that the U.S. Energy Banks cater for the regional and international demands of the exploration, production and service industries. Hence, with greater demand, market size, diversity, depth and opportunity overseas, the human resources to service the composite needs of the industry, have developed rapidly over the last 10 years. In Australia, being geographically isolated, it has been difficult until recently to attract skilled personnel as they are fully utilised in London, New York, Calgary, Houston, San Francisco, Montreal, Tokyo, Paris, Singapore and Hong Kong to mention but 10 of the leading centres.

From the preceding observations it may seem that an active involvement by the domestic institutions in the future, in the Australian petroleum industry appears limited. However, the opinion of this author is quite to the contrary.

It is believed that the greatest hurdle to be overcome is that of obtaining people with relevant expertise which will now be considered in greater detail. It is believed that this hurdle can be overcome if the following basic questions can be solved:—

(i) How could the petroleum exploration and development industry become more greatly involved with domestic institutions such as trading banks if they were capable of providing a sophisticated tailored service?

(ii) From the institutional viewpoint, what should be the structure, the target markets, and how much will the service cost to establish?

(iii) Who will be the staff and where will they come from?

The Potential Usage by Clients of a Sophisticated Petroleum Bank

Most petroleum industry people would have had some experience in approaching bankers seeking working capital, loan funds or project finance. At times many would have come away feeling that the bank manager was a nice friendly fellow but didn't quite understand what the project was really about. This was because the manager was unable to determine on the spot the feasibility of the project simply because of his inability to interpret the mass of technical data associated with the proposal.

Let us assume that the supporting documentation to the proposal is an appraisal of the project by the company and that it requires some form of finance to develop a specific resource such as proved and probable hydrocarbon reserves. The proposal has technical reports appended such as well completion reports, regional evaluations, petroleum engineering studies, future appraisal programmes and complex drilling data on work already completed.

The problem for the bank is to determine what strategy to adopt or whether to give the client the money. The applicant might be sitting on a bonanza but because of his lack of technical expertise, the banker cannot see it. He has difficulty in determining security value on something that is in the ground untapped, undeveloped, unprocessed and without a defined market. This being the case, the traditional banker as a way out, asks "Have you any properties to mortgage?", to which the potential petroleum developer may give a series of terse replies and that is the end of the deal. Alternatively the banker will offer to send the proposal overseas for an assessment by a correspondent international bank or his own overseas shareholder with a decision forthcoming sometime in the future.

Financing energy based projects secured by bricks and mortar is *not* petroleum banking. Petroleum banking is assessing what is in the ground, its current and future potential as a revenue producer and to then determine a funding package to either exploit where possible, or to appraise it further if the project is not mature enough to attract other than venture capital. This evaluation requires the expertise of those who have had the relevant technical as well as financial experience. It is this integrated approach which will ease the lenders' uncertainties where he is unable to make a commercial assessment owing to the mass of technical data associated with the proposal. Clearly, if the right person is sitting next door or upstairs, i.e. *on the spot,* the banker is able to provide the potential client with the first stage of assistance by a detailed evaluation in his own office which then leads to the assessment of the commercial viability of the proposition, very quickly.

As an example, it will be necessary among other criteria to determine the value of the resource in the ground from a technical evaluation of proved and probable reserves in place together with an assessment of management capability and sponsorship of the project, together with an evaluation of production and recovery techniques as to whether exploitation is being completed by a proven technology or a departure from it together with an assessment of operational and completion risk. Then would come detailed evaluation of markets, the security to be pledged, an analysis of the cash flow and thence the determination of the repayment schedule. Before forming an opinion, the banker should rely on the professional input of specialists who are well versed in handling these types of projects.

In case of structuring deals of this type, security relating to fixed assets is usually a relatively minor consideration, cold comfort for the traditional banker. Quite obviously, there are many additional criteria to be considered dependent on the project, which cannot be discussed at length here.

The main point is that clearly for the proposal to be discharged satisfactorily from both the bank's and the client's viewpoint, that there should be considerable rapport between the technical and financial personnel responsible for the analysis of the potential investment before a decision is made on whether to accept or reject it. Here the strength of personnel who have the dual technical and financial expertise comes into its own. The final decision to proceed or otherwise should be made by senior management in conjunction with the personnel who completed the analysis so as to ensure that the eventual decision makers have adequate access to all relevant input, if so desired.

One major problem confronting the potential producer is the determination of a mutually acceptable repayment schedule supported by adequate security to both himself and the lender.

As indicated previously, lending on purely a balance sheet basis is not true petroleum lending. Sometimes in relation to repayment, more sophisticated methods are required, and what is becoming more prevalent is an imaginative application of the self-amortizing loan, where primary reliance for the ultimate payback is on the sale of oil or gas from the producing property.

Branson [3], indicates that one type of financing which is seeing increased usage is the *Evergreen Revolving Hydrocarbon Credit.* In this facility only the accrued interest is paid as long as the value of producing properties in terms of future production, remains in excess of an agreed multiple of the outstanding loan amount. Such a facility offers the maximum flexibility in the use of funds.

Although the funds are used for exploration, the lending institution does not rely on the success of these efforts to repay the loan. Rather, their success serves primarily to expand the established borrowing base for further exploration. Should fields prove promising enough to merit full development, separate financing may be arranged against specific take-or-pay contracts, or perhaps a pipeline throughput agreement if the infrastructure costs are particularly high.

An example of such a credit would be a company which has unencumbered producing properties in Indonesia and exploration commitments in the Phillipines and Australia. Without the benefit of venture capital, only the funds available from the

particular year's production cash flow would be available for pure exploration purposes.

Petroleum Engineers for the bank would normally evaluate the field to determine the volume of future production over its economic life. Application of a reasonable figure per unit of crude, when discounted to present values, would give the current value of the properties.

Depending on the number of fields, the number of wells in each field, concentration of production, a borrowing base future value/loan ratio of perhaps 2.5:1 would be established. Thus, if the value for future production was $100 million, a borrowing base of $40 million would be established for the revolving credit.

Quarterly review of additional production data, pricing, new discoveries and enhanced production data would re-establish the borrowing base. As long as the ratio of future production to loan was equal to or in excess of 2.5:1, only the accrued interest would be paid. Should future values decline, principal repayments would be required to bring the ratio back into line.

Thus, proved and probable reserves of petroleum with or without production or sales contracts, may be leveraged for current use in exploration programmes. This is particularly applicable to South-East Asia where numerous small fields are undergoing exploration. This method of financing could be adopted in the Australian environment, given demand and familiarity in execution of documentation by the bank.

As the credit analysis by an account officer could require much technical expertise to provide relevant input, only specialised banks will be in a position to evaluate the risk to the lender. However, accurate reserve estimation and relative price stability make this acceptably low-risk lending, despite the recent fall in the price of oil in real terms.

Utilisation of such methods and greater use of advances against throughput pipeline agreements and take-or-pay purchase contracts will be a developing area of project finance for the petroleum industry during the 1980's, particularly as development costs continue to escalate. Traditional commercial bank lending will not be adequate to meet the petroleum industry's needs and must be augmented by such methods of financing, amongst others.

As the risk factor in a particular project increases, so does the reward for taking that risk. Drilling exploratory wells in search of petroleum is a high risk business. It is a fact that other than taking direct equity in the project, the maximum reward available to a commercial bank is repayment of all the principal advanced plus payment of interest. As the reward to the lender is thus quite low, the associated risk must also be minimised. By lending against known, closely evaluated reserves of producing properties and using commercial facilities such as the revolving credit, the bank assumes an acceptable level of risk for its low reward.

Location

The question relating to the physical location of the capability within the banks as they exist today in Australia, is very important. The ideal locations for establishment are in Melbourne, Sydney and Perth.

It is important to recognise the significance of Australia as an emerging regional centre owing to its geographical location close to South-East Asian petroleum markets. South East Asia is serviced extensively by the international banks, but it is worthwhile remembering that Singapore and Kuala Lumpur are all closer to Sydney, Melbourne, and Perth than to the United States and Canada or Europe, whilst Perth is closer to South East Asian financial centres than either Sydney or Melbourne.

Markets

(1) A major market other than servicing the industry directly, immediately presenting itself, is to service State Government instrumentalities. In 1980 the guidelines were changed for overseas fund raising. As State Governments are now permitted to borrow abroad particularly for resources projects, the scope exists for a technical advisory capacity to be offered to these instrumentalities coincident to the normal type financial advisory service currently available.

Many of the domestic banks Corporate Services' Divisions are now starting to service this market very effectively, but given Australian infrastructure requirements over the next decade, many new opportunities could present themselves.

(2) Given that it has the expertise, the bank could provide technical as well as financial consultancy services particularly in the exploration phases where the smaller companies traditionally are most financially vulnerable.

(3) Many of the larger Australian companies which are customers of the trading banks have

established, are establishing, or are considering some degree of diversification into the petroleum industry. If the right mix of technical and financial corporate advisory capability was available from the bank on a consultancy basis, it could have a major impact on the clients' strategic planning and financial commitments as well as expanding simultaneously the Corporate Services' capability of the bank.

Indeed, in many cases and traditionally the larger mining and petroleum companies in Australia have appointed international financial advisors, since these advisors should be completely conversant with the most up to date ways of providing finance on a competitive basis as well as having the technical analytical capability in the head office overseas available on a call basis.

It is now gratifying to see that the domestic banks have realised this opportunity and are starting to make significant inroads into these advisory areas in an increasing number of Australian resources projects which hitherto had been virtually the exclusive domain of the international banks.

Infrastructure

This question relates specifically to the financial institutions, particularly the Australian trading banks.

The cost of developing the necessary infrastructure should be scaled relative to demand for service, market acceptability of the concept and the ultimate potential profitability to the bank. It could be as sophisticated as a new department within an existing structure such as Corporate Services where the trade off could be high overheads, particulary in the formative stages. The other extreme is the single man operation within a Corporate Finance or Project Finance department relying heavily on correspondent relationships for the provision of both a lending base as well as direct access to expertise particularly from the overseas shareholder(s).

Cases precedent from overseas suggest that the successful Energy Departments generally started from humble one or two man beginnings within the Corporate Finance or International Division and then expanded and consolidated especially relating to personnel, subject to demand for services and ultimate profitability. The most difficult constraint appeared related to controlling the rate and size of growth of the department particularly as the demand for services increased rapidly and the department diversified to cover all facets of the business as opportunites became evident.

The author would suggest that a similar development strategy could take place in Australia as the domestic banks offered services on an equally competitive footing to that available from the leading international banks, despite the Australian overall aggregate market being smaller.

Personnel

Regrettably, the unpleasant news pertains to available personnel, and the problem in Australia is identical to the U.S. experience. The type of individuals required to establish the concept need to have considerable industry experience and an established reputation, preferably with at least 10 years technical experience in a variety of geological and especially Petroleum Engineering functional roles generated from working with the oil companies. The optimum person would also have had some degree of financial exposure and also have a commercial degree. In the U.S. many of the bank management in the Energy Divisions are Petroleum Engineers with an M.B.A. Even the accounts officers have at least a technical degree from a good Petroleum Engineering University and/or a commercial degree.

In Australia, there are very few indigenous personnel of the necessary calibre available and indeed when they do appear, the petroleum companies generally endeavour to hire them before the bank does.

Since 1973, Australian Universities, a traditional resource pool, have experienced a major downturn in the number of graduate geologists and geophysicists. There is no Graduate School available in Australia to train Petroleum Engineers. Fortunately, since 1979, the trend relating to graduate geologists at least, now appears to be reversing particularly owing to the recent attempts to APEA to redress the situation by having senior industry personnel in direct interface between tertiary institutions, colleges of advanced education and the secondary schools.

Generally, the universities provide the graduate personnel who are attracted initially to the major oil companies from where they gain in-house training and experience both domestically and overseas. With this experience comes a gradual introduction into areas of management which eventually involves a direct exposure to areas of financial responsibility. Usually this exposure does not occur until at least 8-10 years professional experience has been gained.

To emphasise the shortage of personnel, at the most recent APEA Conference in Adelaide, in 1981, of approximately 1000 registered delegates, only 34 industry consultants were represented with only 24 having greater than 10 years experience. The optimal mix of Australians with a technical as well as financial background reduced the total to 8.

Hence it is quite clear that the domestic resource pool for the banks is very limited at present with the problem further compounded by intense competition to obtain experienced personnel from within the industry itself.

However, all is not gloom despite these discouraging observations. Many skilled people who were the victims of the decline of the mining boom in 1970, and the Government policies that followed in 1972/75 were forced overseas. These people could now provide the nucleus of the expertise necessary as most would now have at least 10 years experience and could be attracted to return to Australia in significant numbers as many have children of school age who would prefer to be educated in Australia than overseas. Many in fact also have practical financial experience having worked in the Energy Departments of several of the large international banks over the last five years.

The major difficulty in convincing these people to return to Australia relates to remuneration as most working overseas would be in receipt of substantial expatriate packages which if structured with finesse, should be subject to much lower rates of taxation than in Australia. Fringe benefits in some such overseas packages would include housing with servants, coverage of education expenses for children, coverage of medical costs, substantial expense accounts, and repatriation to Australia for the family every 2 years. The base level of this type of package is generally designed to attract the minimum rate of taxation in the country where the individual is working. In countries of high tax rate, the employer generally covers excess taxation liabilities thus ensuring that the employee's standard of living in real terms is not eroded. Hence, in many cases the individual is capable of either saving or investing at least $20,000 per year which would be virtually impossible in Australia.

Given a favourable taxation regime being devised to attract these experienced people, two major obstacles then need to be overcome.

Initially, it will be very difficult to convince senior management in Australian financial institutions that to pay sizeable remuneration packages is really necessary, particularly if the package is substantially in excess of their own. If it was proposed to the Senior Manager of an Australian trading bank, insurance company and to a lesser extent, the merchant banks that to attract the necessary person a package for a petroleum engineer for example, with 10-15 years experience would need structuring in relation to the current industry rate of $50,000-$80,000 per annum, they would not believe you. A person with this type of technical experience and relevant banking experience gained overseas could attract significantly more. However, if such a proposal was put to a large overseas Energy Bank, there would probably be a major effort to secure his (her) services.

This fact is even more pronounced of late in the U.S. as many skilled bank personnel are now being aggressively head hunted by the U.S. independent oil companies on massive packages and direct equity participation in the company as well as obtaining production overrides on any discoveries in which they were directly associated.

In addition, in Australia it will be necessary to design a tax minimisation package. Such efforts will require an entrepreneural approach at the very least from the personnnel department of the financial institutions. Consequently, for the skilled people to come back to Australia, exceptionally far sighted policies will need to be developed in conjunction with, and approval obtained from, the Commissioner for Taxation. Hopefully, the post-Campbell world will make this task a little easier.

Conclusion

A sophisticated petroleum banking structure can be established in Australia as the embryo is there now but a substantial amount of consolidation needs to take place.

The market exists both in Australia and in South-East Asia to justify it and from comments from colleagues within the industry, it is both necessary and long overdue.

Financial institutions should get over the conceptual difficulty that it can't be done because the problem is too difficult or it's too late.

The author believes that provided the right type of personnel tackle the problem, nothing is impossible in order to provide valuable new services which will be pertinent to the new challenges that the industry will present through the 1980's.

Rather, the author believes that the more pertinent question that needs to be answered is, *"Can Australia Afford NOT to have a Sophisticated Petroleum Banking System?"*

FOOTNOTE:

This paper is derived from the condensation of a number of addresses given by the author to various bodies, including the Petroleum Exploration Society of Australia.

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