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INDEPENDENT VALUATION
of
PETROLEUM ASSETS
of
EURO PACIFIC ENERGY PTY LTD,

Prepared for
Genesis Resources N.L.

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SUMMARY

By letter dated 30 November, 1999 PetroVal Australasia Pty Ltd has been requested by the Board of Directors of Genesis Resources N.L. to provide an independent valuation of the petroleum exploration assets of Euro Pacific Energy Pty Ltd. Genesis Resources N.L. has the option to acquire these assets by 31 December, 1999.

The fair market value represents a range between \$70,000 to \$460,000 with \$285,000 as the most likely. A tabulation follows:

Valuation of the Petroleum Exploration Permits of Euro Pacific Energy					
Permit	Basin	Equity %	Fair Market Valuation		
			Low	Most Likely	High
Vic/P39	Gippsland (<i>offshore</i>)	33.0	nil		
WA-272-P	Perth (<i>offshore</i>)	25.0	nil	30,000	50,000
EP-413	Perth	1.278	10,000	15,000	20,000
EP-414	Perth	2.556	20,000	75,000	150,000
EP-369	Merlinleigh	95.0	Nil	100,000	150,000
EP-406	Carnarvon	100.0	40,000		
EP-110	Carnarvon	8.2	Nil	25,000	50,000
Total:			\$70,000	\$285,000	\$460,000

INTRODUCTION

Scope

By letter dated 11 August, 1998 PetroVal Australasia Pty Ltd has been requested by the Board of Directors of Genesis Resources N.L. to undertake an independent valuation of the petroleum exploration assets of Euro Pacific Energy Pty Ltd, ('Euro Pacific').

Genesis Resources N.L. currently holds the option to acquire these assets prior to 31 December, 1999.

The data was originally reviewed at the Perth office between 17-20 August, 1998 and a report issued thereafter. The valuation has been updated to reflect the interim history.

Disclaimer

This report has been prepared based solely upon the documents provided by Euro Pacific Energy Pty Ltd., during 17-20 August, 1998, and subsequent information supplied during November, 1999 and other limited public information from PetroVal's databases. Copies of permit award, renewal, and other joint venture documents from the various Government Mines Departments and joint venture operators were sighted, which indicated that the companies had the equity levels referenced herein for the various permits.

PetroVal has not searched titles, nor conducted due diligence on any contracts or joint venture agreements, or on any other legal or accounting matters, and is not qualified to provide an opinion thereof in regard to this analysis.

PetroVal does not warrant that its investigation has identified or verified all of the matters which an extensive examination and analysis or due diligence investigation might otherwise disclose.

METHODS

Fair Market Value

The Valmin Code adopted by the Australian Institute of Mining and Metallurgy defines Fair Market Value as the estimated amount of money for which, in the opinion of the expert, the asset should change hands on the valuation date between a willing buyer and a willing seller in an arm's length transaction wherein each party had acted knowledgeably, prudently and without compulsion.

The VALMIN code specifies the use of a Low, Most Likely and a High market value assessment.

For producing assets the assessment of value is usually determined via analysis of a discounted cash flow. Exploration value is often more subjectively determined since it relies on a technical judgement of the geological prospectivity of respective permits. An assessment of farmout potential and expected monetary value, ("EMV"), provide alternative methods. A review of comparable farmout transactions is usually pertinent.

Valuation of Exploration Assets

Analysis

The first requirement has been to assess the prospectivity of the exploration portfolio and for each permit the following technical data have been considered:

- Results of previous exploration;
- Permit work programme and expenditure commitments;
- Joint venture budget and forecast work programme;
- Geology of the permit relative to the sedimentary basin; and, primarily,
- Geological merits of each prospect and lead.

A judgement of the prospectivity provides the basis for the assessment of Fair Market Value. The valuation method takes into consideration:

- Transactions in which equity is bought and sold;
- Proposed or notional farmins or farmouts; and,
- Prospect risking, notional revenue cash flows and expected monetary value.

Other criteria or rules-of-thumb such as discovery costs per barrel have not been used as a basis for this valuation.

Usually, producing petroleum assets are best valued using discounted cash flow analysis. For an exploration permit, where there is no production, the most reliable market value is usually based on farmin, farmout or purchase transactions within the permit or in adjacent permits with comparable geological prospectivity and operating constraints. The farminee (purchaser) usually agrees to fund a significant exploration programme, either seismic and/or drilling, in return for the farmor (seller) transferring a significant equity in the permit to the farminee.

In the case of farmouts, the farmor does not receive a cash payment for equity; the farminee accepts the expenditure liability and cash is spent on further exploration in the permit in which the farmor retains a reduced equity. The cash equivalent is calculated based upon the expected value or actual cost of such exploration expenditure.

A simple example illustrates the method. Consider that a company holding 100% of a permit proposes to reduce its exposure to the risk of drilling by offering a 50% equity to a farminee for the 100% funding of a well estimated to cost \$5 million; *i.e.* a 2:1 offer. The simple value of the transaction is to calculate that the expenditure of \$5 million earns 50% equity and therefore, based on the earning rate, \$100,000/%, of the farminee, the gross permit is valued at \$10 million.

There are, however, other considerations which reflect the value to the farmor. Should the farmor have planned to withdraw from the permit rather than conduct the work programme then the value of the transaction to the farmor is the *pro rata* expected monetary value (EMV, discussed below) of the prospect. Should the farmor have been willing to fund the work, but elected to farmout in order to allocate elsewhere the funds saved, then the value to the farmor is the amount of funds saved, notwithstanding its reduced equity.

In any transaction the benefit to the farmor and the cost to the farminee must be assessed to determine the appropriate market value. The assessment of value based on recent transaction history also requires a

consideration of whether the terms of the transaction are still relevant, for example, changes of the oil price or a subsequent discovery.

Should there be no farmout or sale transactions for a permit, or for adjacent permits, the assessment of Fair Market Value becomes more subjective. Usually, a judgement, based on the technical data, of a nominal farmout may provide a reasonable value.

Where there is no comparable transaction, or where significant technical assessment has been carried out subsequent to a transaction, the Expected Monetary Value (EMV) method may be used. This involves:

- Calculation of the speculative quantities of hydrocarbons which may be discovered based upon the expected size of an identified prospect or lead;
- Estimation for the prospect of the probability of geological success;
- Assessment of various development scenarios;
- Calculation of a cash flow enumerating capital costs including the cost of the exploration well, production profiles, product prices and operating costs;
- Discounting of the cash flow to a Net Present Value (NPV) to reflect the cost of capital and a premium for commercial risk and the present value of money; and,
- Calculation of the EMV to account for the probability of exploration success.

For the last step the EMV is calculated using the cost of drilling the well to explore the prospect and the probability of success (POS) derived from an explorationist's perception of the risk or chance of a discovery. The formula is:

$$\text{EMV} = \text{NPV} \times \text{POS} - (1 - \text{POS}) \times \text{Well Cost}$$

As an example, consider an oil prospect which is judged to have the potential to return a discounted cash flow NPV of say, \$25 million with a probability of success of 20% and a well cost of \$2 million. Therefore:

$$\begin{aligned}\text{EMV} &= 25 \times 20\% - (100 - 20\%) \times 2 \\ &= 5 - 1.6 \\ &= \$3.4 \text{ million}\end{aligned}$$

Such calculations account for the probability of the two possible outcomes; firstly, the probability of a discovery and secondly, the more likely probability of failure. This method is becoming more widely utilised within the petroleum industry as a ranking tool which enables the relative merits of leads and prospects to be compared on a consistent basis. High ranking leads may be further explored, for example, by acquiring additional seismic, with the objective of delineating drillable prospects. The EMV for leads needs to be further discounted to reflect the success rate for upgrading leads to drillable prospects.

For valuation purposes the EMV technique should only be used in basins with sufficient exploration and production history where exploration risks, reservoir performance and production and operating costs are well known. This method is inappropriate in areas where the risks are not well understood and/or where there is insufficient history of exploration for the statistical database to be reliable.

The book value of capitalised exploration expenditures is not considered to be representative of Fair Market Value since under Australian accounting standards exploration expenditure may be capitalised until production commences, in which case it is amortised, or the permit is relinquished precipitating a capital write-down.

Assessment of Fair Market Value

For the assessment of the Fair Market Value for each specific permit or aggregation of permits a judgement is made after consideration of the following:

- analysis of the potential for additional discoveries and their probable size;
- Expenditure commitments and forecast work programme;
- Cash flow forecast and EMV for each lead or prospect; and,
- Recent sale and farmin/farmout transactions.

Vic/P39 – Gippsland Basin, offshore Victoria*Euro Pacific Energy Pty. Ltd. – 33%*

The permit was awarded on 31 July, 1997 for a six year term and comprises an area of 750 square kilometres. It is located over the central deep portion of the offshore Gippsland Basin in the proximity of several major producing oil and gas fields. The agreed work programme is summarised as follows:

Vic/P39 : Approved Work Programme		
<i>Year</i>	<i>Commitment</i>	<i>Minimum Expenditure</i>
	<i>Primary Term</i>	<i>\$(million)</i>
1	400km seismic reprocessing	0.25
2	500 km 2D seismic	0.75
3	One well	6.50
	Subtotal:	7.5
	<i>Secondary Term (optional)</i>	
4	Data Review	0.25
5	500 km 2D seismic	0.75
6	One well	6.50
	Subtotal:	7.5
	Total:	15.0

The Year-1 programme was completed but depth mapping did not identify any prospects of commercial size at the top Latrobe horizon. During early 1999, in correspondence with the Department of Natural Resources and Environment, Victoria, the joint venture has offered to surrender the permit and seek relief from the obligations of the guaranteed, primary work programme. This is contrary to the conditions of the permit. The matter is awaiting further deliberations by the Department of Industry, Science and Resources, Canberra.

From the perspective of the vendor the current situation represents a liability for guaranteed work programme which cannot be technically justified. For Genesis Resources N.L., there is no technical justification to exercise the option to acquire the equity of Euro Pacific.

The Fair Market Value of Vic/P39 is nil.

WA-272-P; Perth Basin, offshore W.A.

Euro Pacific Energy Pty. Ltd. - 25%

The permit covers an area of 5,900 square kilometres and is located in the Vlaming Sub-Basin which comprises the southern, offshore portion of the Perth Basin. The area is adjacent to Fremantle and the nearby Kwinana Oil Refinery. Water depths vary between 20 to 2,000 metres.

The permit was awarded to the joint venture on 12 August, 1997 for a six year term. Commitments for the primary three year term are firm and the agreed work programme is as follows:

WA-272-P : Approved Work Programme		
<i>Year</i>	<i>Commitment</i>	<i>Minimum Expenditure</i>
	<i>Primary Term</i>	<i>\$(million)</i>
1	Data Review	0.20
2	500 km Seismic Survey	0.50
3	Seismic Interpretation	0.20
	Subtotal:	0.90
	<i>Secondary Term</i>	
4	One (1) well	6.00
5	3D Seismic Survey	2.50
6	One (1) well	5.60
	Subtotal:	14.10
	Total:	15.00

Gross permit expenditure for Year-1 has been \$0.13 million. A variation has been sought for the Year-2 seismic programme with a reduction to 100 km. West Oil N.L. as operator and with 50% equity intends to withdraw from the joint venture. An alternative party has indicated willingness to join the joint venture subject to the grant of variation of terms. This is contrary to the minimum guaranteed work programme.

The Vlaming Sub-basin contains a thick fluvial section of Jurassic and Cretaceous sediments. Previous exploration, which included the drilling of six wells, tested tilted fault blocks beneath the intra-Valanginian unconformity. These wells were interpreted to be unsuccessful, because they were either drilled off-structure or because effective seals were not encountered. A number of large undrilled anticlinal traps associated with erosional topographic highs at the intra-Valanginian unconformity have been identified and are interpreted to be sealed by the South Perth Shale. These traps are considered to be lower risk than the tilted fault block play. The Gage Roads-1 and 2 wells located immediately to the north of the permit tested oil from the Gage Sandstone and proved the presence of oil-prone source rocks.

During Year-1, a re-interpretation of the available data was completed and upgraded the Rissikia Prospect with about 30 square kilometres of closure and 360 metres of structural relief. The prospect lies in 400-700 metres of water. Further seismic is required to define a drilling location. The proposal for 100 kilometres of seismic is to upgrade the status of the prospect sufficient to attract a farminee to either acquire the remaining 400 km of the Year-2 programme or, to drill a well. If unsuccessful, the permit will be surrendered.

Based on the current outlook, the low value is nil and the most likely value is simply the costs to date. The high value assumes that a seismic farminee will be attracted.

The Fair Market Value of Euro Pacific's 25% equity in WA-272-P lies between nil and \$50,000 with \$30,000 as most likely.

EP-413; Perth Basin, onshore W.A.*Euro Pacific Energy Pty. Ltd. – 1.278%*

This permit comprising 11 graticular blocks or parts thereof, was renewed in August 1999 for a term of five years and the work programme is as follows:

EP-413 R1 : Approved Work Programme		
<i>Year</i>	<i>Commitment</i>	<i>Expenditure (A\$ million)</i>
1	One well and geological and geophysical studies	1.10
2	50 km seismic	0.25
3	One well	1.00
4	Data review	0.05
5	One well	1.00
Total:		3.40
<i>NB: the Year-1 well may be drilled in either EP 413 or EP 414</i>		

The permit was split from EP-100 (parts 1, 2, 3 & 4) which after several relinquishments had been reduced to four separate areas and two joint ventures. Effectively, EP-100 (1) became the nucleus of EP-413 and EP-100 (2, 3 & 4) became EP-414 with separate titles, joint ventures and work programmes. However, an obligation for the drilling of a well in the previous EP-100 was transferred into the new permits. It is planned that the well will be drilled in EP-414 unless no reasonable prospect can be identified in which case the obligation reverts to EP-413.

The operator, Boral Energy has mapped the Freshwater Point Prospect with Permian objectives within the Wagina Sandstone and High Cliff Sandstone. The EMV for gas and oil respectively ranges between \$0.3-0.8 million. The budget for technical work for Year-1 is \$0.126 million and includes some seismic re-processing, geochemistry and fault seal analysis.

Permits in the northern Perth Basin have been valued on numerous occasions over the past five years. The most significant recent farmin occurred when Phoenix Energy Pty Ltd agreed to fund expenditure up to \$13 million to acquire a half share in the available equity of Discovery Petroleum NL (now Premier Oil) in each of the latter's permits in the basin. Otherwise, farmins to a single permit have generally been within the range of \$5,000-\$25,000 per percentage of equity transferred.

The valuation is based upon the range of historical transactions. The 1.278% equity of Euro Pacific in EP-413 is valued between \$10,000 to \$20,000 with \$15,000 as the most likely.

EP-414; Perth Basin, onshore W.A.*Euro Pacific Energy Pty. Ltd. – 2.556%*

This permit comprises three parts for a total of 15 graticular blocks (six in part-1, four in part-2 and five in part-3), and was renewed in August 1999 for a term of five years and the work programme is as follows:

EP-414 R1 : Approved Work Programme		
<i>Year</i>	<i>Commitment</i>	<i>Expenditure (\$ million)</i>
1	One well and data review	1.05
2	50 km seismic	0.25
3	One well	1.00
4	Data review	0.05
5	One well	1.00
Total:		3.35
<i>NB: the Year-1 well may be drilled in either EP 413 or EP 414 (refer to EP 413)</i>		

During early 1999 the Dee Seismic Survey of 138 kilometres was acquired over the greater Walyering structure and the cost was \$0.7 million. Walyering-1 was drilled in the early 1970s and on test flowed gas initially at 10 mmscf/d from sandstones of the Cattamarra Coal Measures. However, the gas accumulation was only small and depleted over an extended production test of several months duration. The Walyering Prospect is mapped within a fault block adjacent to Walyering-1. The Cattamarra lies at about 3,300 metres depth and the undiscovered potential is ~260 Bcf of gas. Subject to final mapping and joint venture approval, a Walyering-4 well is anticipated for drilling during 2000.

The low value is based upon the historical cost of the Dee seismic survey and the most likely assumes that the proposed Walyering-4 will be farmed out on terms equivalent to analogous projects in the Perth Basin (Gin Gin and Wicher Range). The high value includes a risked estimate of a successful well.

The 2.556% equity of Euro Pacific in EP-414 is valued between \$20,000 to \$150,000 with \$75,000 as the most likely.

EP-369; Merlinleigh Sub-basin, onshore W.A.*Euro Pacific Energy Pty. Ltd. - 95% (Operator)*

The 2,425 square kilometres permit is located some 150 kilometres north-west of the coastal town of Carnarvon and is in the southern onshore Carnarvon Basin. The area has only been lightly explored with two wells and approximately 800 kilometres of seismic. The first permit term expired on 19 January, 1998 and a renewal application has been lodged for a second five years with relinquishment points at the end of each year as follows:

EP-369 : Proposed Second Renewal Programme		
<i>Year</i>	<i>Commitment</i>	<i>Minimum Expenditure (\$million)</i>
1	One (1) well	0.34
2	Data Review	0.02
3	Seismic reprocessing	0.05
4	Seismic Interpretation	0.03
5	Prospect Review	0.02
Total:		0.46

The joint venture has been given approval to defer the Year-1 commitment well to Year-2 to provide additional time to seek a farminee to fund the drilling of the Naomi prospect.

Naomi-1 is proposed as a 650 metre test of a broad anticlinal feature with the primary objective being the Permian Moogooloo Sandstone. The nearest well, Burna-1, is located some 10 kilometres east and was drilled in 1982 to test a tilted fault block but is thought to have been unsuccessful due to an inadequate fault seal. The well encountered 83 metres of Moogooloo Sandstone with fair reservoir quality.

The high value is assessed on a notional farmout on weak terms to drill the Naomi-1 well. The most likely value is a discount of the cost of the seismic survey that led to the delineation of the Naomi Prospect. The low value assumes no farmout can be obtained and the permit is surrendered.

The 95% equity of Euro Pacific in EP-369 is valued between nil and \$150,000, with a most likely value of \$100,000.

EP-110; Carnarvon Basin, onshore W.A.*Euro Pacific Energy Pty. Ltd. – 8.2%*

The permit was previously subdivided into two blocks, the main block with six participants and the Ruby block with five participants. The parties have executed a Deed for the consolidation of the two blocks, a new joint operating agreement is under negotiation and the operatorship is likely to be transferred to Pan Pacific Petroleum N.L. Euro Pacific will hold at least 8.2% equity in the consolidated permit, increasing to 10% by pro rata distribution of equity from Hardman Resources upon renewal approval.

An application has been submitted to renew the permit for the fourth and final term and proposes the following work programme for the remaining nine graticular blocks:

EP-110 : Work Programme for a Proposed Permit Renewal		
<i>Year</i>	<i>Commitment</i>	<i>Expenditure (A\$ million)</i>
1	40 km seismic	0.25
2	Technical review	0.04
3	One well	0.50
4	Seismic re-processing	0.05
5	Technical review	0.05
Total:		0.89

The joint venture continues to await formal notification of the renewal of the permit but in the interim has conducted the Amethyst seismic survey of 26 kilometres and this has been accepted as fulfilment of the Year-1 renewal work programme.

Interpretation of the new seismic data has led to a reduction in the size of the Amethyst lead and a further six kilometres of seismic is recommended to identify the structural crest. This is considered the most promising lead and comprises an upthrown fault block with several local highs of limited independent closure. Jade-1 was previously drilled on the downthrown block and proved the extension of the reservoir rocks at the base Cretaceous.

The low value is assessed as zero on the basis that the Amethyst lead has been downgraded. The most likely value is based on the cost of the Amethyst survey and the high value includes a notional farmout of a well in Year-3. The Fair Market Value of the equity of Euro Pacific in EP-110 lies between nil and \$50,000 with \$25,000 as the most likely.

EP-406; Carnarvon Basin, offshore W.A.*Euro Pacific Energy Pty. Ltd. – 100% (Operator)*

This permit was awarded on 29 November, 1996 and lies offshore encompassing the northern portion of Shark Bay and including Bernier and Dorre Islands. The approved work programme is as follows:

EP-406 : Approved Work Programme		
<i>Year</i>	<i>Commitment</i>	<i>Expenditure (\$ million)</i>
1	Data review	0.05
2	100 km seismic	0.10
3	One well	0.50
4	One well	0.50
5	Data review	0.05
6	Data review	0.05
Total:		1.25

The anticipated exploration operations are subject to environmental constraints and in early 1998 the DOME advised that the Shark Bay Marine Reserves Heritage Area Commonwealth/State EPA assessment programme had been initiated and recommended an application for a suspension of terms for one year. Consequently, on the grounds of *force majeure*, the joint venture has been granted a suspension of the permit conditions for year-2 but due to a delay of the environmental study the suspension was extended for a second year to 28 November, 2000.

Effective on 23 August, 1999 Tap Oil N.L. withdrew from the permit and assigned its equity to Euro. The net costs incurred to date are \$0.04 million.

Until the permit status is resolved the Fair Market Value of Euro Pacific's 100% equity of EP-406 represents the costs to date of \$0.04 million.

AUTHORS

Ian Northcott has a B.Sc.(Hons) degree in Geology, a Graduate Diploma in Applied Finance and Investment and has over 25 years experience in the petroleum exploration and production industry, both in the domestic and international sectors. His principal expertise is in reserves assessment, economic valuations, petrophysics and production and exploration geology. He has been consulting to industry since 1981 and has significant prior experience of providing independent reports. Ian is a Fellow of the Australian Institute of Mining and Metallurgy, and a member of the American Association of Petroleum Geologists, the Society of Petroleum Engineers, and the Society of Professional Well Log Analysts. He has the appropriate qualifications and experience to be considered as an Expert under the VALMIN Code of AusIMM.

Andy Whittle has a B.Sc.(Hons) degree in Economic Geology from the University of Adelaide. He has over 30 years of technical and managerial experience in the petroleum exploration and production industry. This includes over 21 years with several affiliates of Exxon Corporation in Australia, Singapore, Malaysia, Canada and the USA, finally in the position of Geological Manager of Esso Australia. Thereafter, he was Exploration Manager for five years with GFE Resources and is now a consultant to the industry. He has prior experience in providing independent technical reports and in evaluating exploration and production assets. Andrew is a member of the American Association of Petroleum Geologists, the Society of Professional Well Log Analysts and the Petroleum Exploration Society of Australia.