



**ESSENTIAL PETROLEUM RESOURCES LIMITED  
QUARTERLY EXPLORATION REPORT  
FOR THE THREE MONTH PERIOD ENDED 31 DECEMBER 2002**

In the December quarter the Company re-evaluated the Port Fairy No 1 well. Studies included remapping of the prospect, geological studies of the reservoir formation and engineering studies of the well. The engineering studies included petrological and petrophysical studies and possible stimulation techniques and alternative completion designs of the well. The initial results of the studies are encouraging and a re-completion program is currently being planned to evaluate the well and determine whether the discovery is commercially viable. A re-completion of the well is planned for March 2003.

During the December quarter agreement was reached to drill the Koroit West prospect in PEP 152, and the well was drilled in January 2003. The well was relatively shallow with a total depth of 850 m. No hydrocarbons were discovered and the well was plugged and abandoned. The failure of the well to discover hydrocarbons is attributed to limited seismic coverage over the prospect area and further studies will be undertaken along the same trend.

In PEP 159 agreement was reached to drill a well on the Banganna Prospect and it is expected that the well will be spudded in the first week of February 2003.

During the December quarter no exploration wells were drilled. A 740 km 2D seismic survey was carried out in Vic/P46 to evaluate the prospectivity of the shelf area within the permit. Processing is currently being undertaken and interpretation will commence as soon as processing is completed.

During the quarter, comprehensive geological and seismic interpretation studies were also undertaken over each of the Company's permits in the Otway Basin.

**PEP 151 - 100% Onshore Otway Basin Victoria**

Negotiations have commenced with members of the Gunditjmara people, who have a native title claim over the crown land that is covered by PEP 151 for a Production Consent Deed in the event that hydrocarbons are discovered in our exploration activities. These negotiations follow on from the successfully negotiated Exploration Consent Deed.

The Company has made application to the Victorian Government to undertake a seismic survey in PEP 151 and the company is awaiting approval for the survey. Pending the approval process a survey will be conducted in either autumn or early spring of 2003.

**PEP 150 - 25% Onshore Otway Basin Victoria**

Origin Energy Resources Limited as the Operator of the permit is continuing Native Title negotiations with the Gunditjmara native title claimants on behalf of the Joint Venture. Preliminary geophysical mapping of the permit is continuing.

**PEP 152 - 33.9% Onshore Otway Basin Victoria**

During the March quarter of 2002 the Company drilled a well on the Port Fairy structure in the PEP 152 permit. The Port Fairy No 1 well, which was drilled in January 2002 as a sole risk project by Essential Petroleum and Lakes Oil NL encountered wet gas shows in the Flaxman and Eumeralla formations over a gross interval from 1382 mRT to 1500 mRT. The well was cased and suspended and a further test of the Flaxman Formation was undertaken in August 2002.

The well initially failed to produce hydrocarbons however one month later the well was revisited and a flow of gas, estimated to be 4 to 5 mmcf/d through a 2 inch flow line, was recorded for a period of about 5 minutes. To determine the pressure-temperature conditions and the type of fluid in the well a down hole pressure survey was subsequently run in the well. A sample of oil was recovered by swabbing the well and the oil and gas samples submitted for analysis. The oil sample appears to be a full range naphtha with a small amount of mono aromatics. The Specific Gravity was 0.77 at 15 degrees Centigrade equivalent to 52 degrees API gravity oil. The analysis indicates a light crude with no evidence of biodegradation. The gas contained condensate and minor light oil fractions and a zero carbon dioxide content. The reservoir appears to be a glauconitic greensand with poor reservoir characteristics which may have suffered significant formation damage during drilling.

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**PEP 159 - 50% Onshore Otway Basin Victoria**

In the December Quarter the joint venture reached agreement to drill the Banganna prospect. The Banganna prospect exhibits AVO anomalies on seismic sections, which may indicate the presence of gas. Banganna 1 will be located in the southwestern part of the permit approximately 15 km north of Port Fairy and close to the Portland to Port Campbell gas pipeline. The well is expected to take about 12 days to reach its total depth of 2150 metres. The well is targeting reservoir sands at the base of the Laira Formation and in the underlying Pretty Hill Formation. If successful, the prospect could contain most likely recoverable reserves of 25 billion cubic feet of gas, with reserve estimates ranging between 12 and 50 billion cubic feet. The well is expected to spud on the 4th of February 2003.

**PEL 72 - 50% Onshore Otway Basin South Australia**

PEL 72 is located in the onshore Otway Basin in southeastern South Australia and was renewed for a period of five years by Essential Petroleum in March 2002. The permit was renewed with Essential Petroleum as the operator and 100 percent sole participant. During the December Quarter, an agreement was reached with Beach Petroleum Ltd, to farm-in to PEL 72.

Under the terms of the farm-in, Beach Petroleum will earn a 50% interest in PEL 72 by bearing 50% of the exploration costs and Essential Petroleum will remain the operator of the permit.

The first year studies have been completed and the joint venture has agreed to conduct geophysical studies, including a seismic survey, in the second year of the permit.

As a result of the farm-in, PEL 72 interest holders in the permit are:



Essential Petroleum Resources Limited                      50%  
 Beach Petroleum Limited    50%

**Vic/P46                      -                      67.5%                                      Offshore Otway Basin**

During the December Quarter a 740 km 2D seismic survey was carried out to evaluate the prospectivity of the shelf area within the permit. Processing is currently being undertaken and interpretation will commence as soon as processing is completed.

**Vic/P50                      -                      100%                                      Offshore Otway Basin**

The work program for the first year has commenced and comprises geological and geophysical studies of the permit

**PERMIT EXPENDITURE SUMMARY FOR THE PERIOD**

<b>Permit Number</b>	<b>Essential Petroleum Interest</b>	<b>Seismic Survey Expenditure</b>	<b>Geological and Geophysical Studies</b>	<b>Environmental Native Title &amp; Permit Maintenance</b>	<b>Drilling Expenditure</b>
PEP 151	100%	\$0.00	\$3,150.00	\$35,005.00	\$0.00
PEP 150	25%	\$0.00	\$1,898.00	\$0.00	\$0.00
PEP 152	33.9%	\$9,210.00	\$13,002.00	\$1,695.00	\$102,968.00
PEP 159	50%	\$0.00	\$4,500.00	\$0.00	\$0.00
PEL 72	100%	\$0.00	\$9,830.00	\$652.00	\$0.00
VIC/P46	100%	\$600,000.00	\$3,098.00	\$3,966.00	\$0.00
VIC/P50	100%	\$0.00	\$2,576.00	\$0.00	\$0.00

*Roger Blake MSc, Exploration Director, Essential Petroleum Resources Limited has prepared this Quarterly Exploration Report.*

# Appendix 5B

## Mining exploration entity quarterly report

Name of entity:

Essential Petroleum Resources Limited

ACN or ARBN

089 956 150

Quarter ended ("current  
quarter")

December 31, 200

### Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date ( 12 months) \$A'000
1.1	Receipts from product sales and related debtors		537
1.2	Payments for		
	[a] exploration and evaluation	(1,046)	(1,538)
	[b] development		
	[c] production		
	[d] administration	(590)	(920)
1.3	Dividends received		
1.4	Interest and other items of a similar nature received	50	94
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid		
1.7	Other (provide details if material)		
<b>Net Operating Cash Flows</b>		<b>(1,586)</b>	<b>(1,827)</b>
Cash flows related to investing activities			
1.8	Payment for purchases of:		
	[a] prospects	-	-
	[b] equity investments	-	-
	[c] other fixed assets	(53)	(76)
1.9	Proceeds from sale of:		
	[a] prospects		
	[b] equity investments		
	[c] other fixed assets		
1.10	Loans to other entities		
1.11	Loans repaid by other entities		
1.12	Other (provide details if material)		
<b>Net Investing Cash Flows</b>		<b>(53)</b>	<b>(76)</b>
1.13	Total operating and investing cash flows (carried forward)	<b>(1,639)</b>	<b>(1,903)</b>

**Appendix 5B**

**Mining exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(1,639)	(1,903)
<b>Cash flows related to financing activities</b>			
1.14	Proceeds from issues of shares, options, etc.	4,676	4,676
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (provide details if material)	-	-
<b>Net financing cash flows</b>		4,676	4,676
<b>Net increase (decrease) in cash held</b>		3,037	2,773
1.20	Cash at beginning of quarter/year to date	3,520	3,784
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	<b>Cash at end of quarter</b>	6,557	6,557

**Payments to directors of the entity and associates of the directors**

**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	173
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

## Appendix 5B

### Mining exploration entity quarterly report

#### Financing facilities available

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities		
3.2 Credit standby arrangements		

#### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	541
4.2 Development	-
<b>Total</b>	<b>541</b>

#### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows:

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	129	144
5.2 Deposits at call	6,428	3,376
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter (item 1.22)</b>	<b>6,557</b>	<b>3,520</b>

#### Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements acquired or increased			

## Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference securities</b> (description)				
7.2 Changes during quarter:				
(a) Increases through issues				
(b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>Ordinary securities</b>	91,348,588	67,378,262		
7.4 Changes during quarter:				
(a) Increases through issues	23,393,586	14,916,086		
(b) Decreases through returns of capital, buy-backs, redemptions				
7.5 <b>Convertible debt securities</b> (description)				
7.6 Changes during quarter:				
(a) Increases through issues				
(b) Decreases through returns of capital, buy-backs, redemptions				
7.7 <b>Options</b> (description and conversion factor)			<i>Exercise price</i>	<i>Expiry date</i>
Founder Options	3,500,000	-	\$0.35	30/06/2004
Employee Options	40,000	-	\$0.25	30/06/2004
Employee Options	40,000	-	\$0.25	30/06/2005
Unlisted Options	400,000	-	\$0.35	30/06/2004
Unlisted Options	100,000	-	\$0.25	30/06/2005
7.8 Issued during quarter				
- Employee Options	40,000	-	\$0.25	30/06/2005
- Unlisted Options	400,000	-	\$0.35	30/06/2004
- Unlisted Options	100,000	-	\$0.25	30/06/2005
7.9 Exercised during quarter	23,393,586	14,916,086	\$0.20	1/12/2002
7.10 Expired during quarter	12,338,919		\$0.20	1/12/2002
7.11 <b>Debentures</b> (total only)				
7.12 <b>Unsecured notes</b> (totals only)				

# Compliance Statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act, 2001 or other standards acceptable to ASX (see note 4).
- 2 This statement does/does not (*delete one*) give a true and fair view of the matters disclosed.

Sign  
here:



Date: 31 January 2003

\_\_\_\_\_  
(Company secretary)

Print Name:

## Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.

- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.

- 3 **Issued and quoted securities:** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.

- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.

- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.