ACN 009 253 187

ASX QUARTERLY EXPLORATION REPORT

for the Period Ended 31st December 2009

HIGHLIGHTS

SA – VULCAN PROJECT

- **New Iron-Oxide Copper-Gold-Uranium system (IOCGU or Olympic Dam-style) discovered in Tasman's first drill hole at Vulcan Prospect, 30km north of Olympic Dam.**
- **The discovery hole hit IOCGU-style veined, brecciated and altered rocks over 240m despite being drilled on the outer margin of the main gravity target of interest.**
- **Assay results confirm enriched, strongly correlated levels of iron (-oxide), copper, gold and uranium and silver (IOCGU metal association).**
- **Tasman has commenced a program of further geological and geophysical work and resolution of an access issue to enable drilling to resume early- to mid- 2010.**

QLD – GOLD & BASE METALS

- **Tasman's Mirrica Project, located on the edge of the Simpson Desert has received a boost with encouraging results from exploration on adjoining tenements (held by Krucible Metals Ltd) to the north.**
- **Surface samples up to 1.44g/t Au and aircore/RC drill intercepts up to 27m at 0.4% Cu from 9m were reported.**
- **Tasman is considering a program of geochemical exploration across interpreted strike extensions of the associated structures into Tasman's adjoining tenements.**

INVESTMENTS

- **Fission Energy (Tasman: 28.1% shareholding, fully diluted as at the 31st December 2009).**

  Evaluation and metallurgical testing of the Mt Thirsty cobalt-nickel-manganese (oxide) deposit continued.

  Exploration for nickel sulphides continued, with a further three diamond drill holes completed. Deepening of an earlier hole, which hit nickel sulphides, will occur early in the next quarter

- **Eden Energy (Tasman: 17.8% shareholding, fully diluted as at the 31st December 2009)**

  Progress was made in the development of Eden's Hythane® businesses in India and the United States.

  A farm-out agreement was concluded with Origin Energy Ltd to farm into Eden's Cooper Basin Geothermal Licence GEL 185 in S.A.

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DETAILS

IOCGU EXPLORATION: Vulcan Project (100% Tasman)

Background

On 10th November 2009, Tasman announced the discovery of a new Iron – Oxide Copper Gold Uranium (IOCGU) system in the first drill hole VUD 001 at Vulcan Project (Figures 1 and 2). This hole was drilled on a relatively small offshoot of a much larger, previously untested gravity anomaly. VUD 001 was not drilled within the main anomaly (see Figure 2) due to an Aboriginal heritage issue, however it is expected that this will be resolved early in 2010, and drilling will then proceed to test the much larger, main anomaly identified.

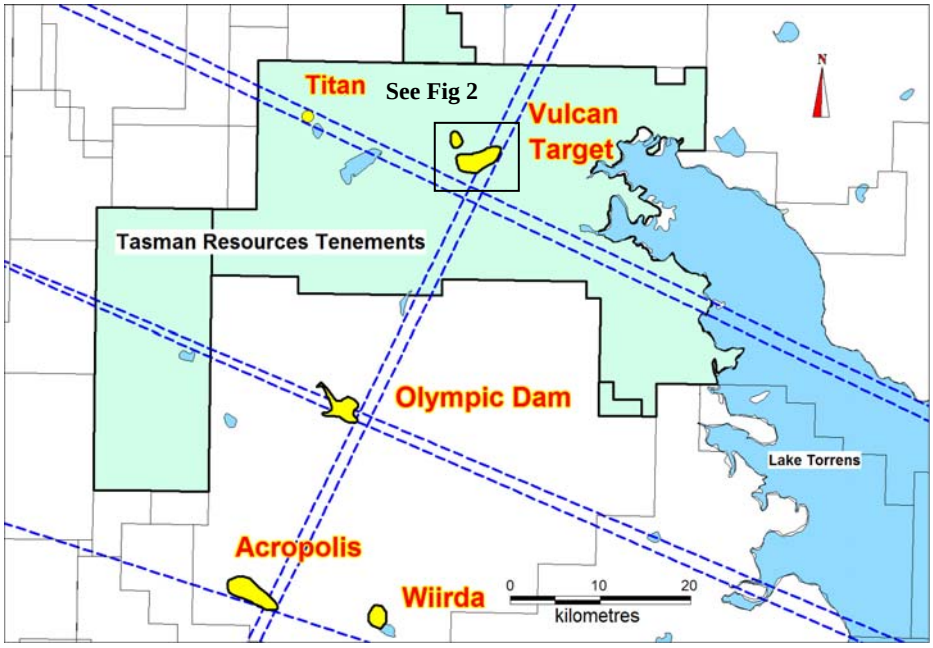


Figure 1: Location Plan showing the Vulcan IOCGU Project, located within Tasman's Lake Torrens Project, nearby IOCGU deposits/systems and several key (historic) tectonic lineaments (dashed blue lines).

Details

As noted on 10th November, VUD 001 was drilled vertically and was collared at 693,862mE and 6,660111mN (GDA 94, AMG Zone 53). Basement was intersected from 870m to the end of the hole at 1113.3m. The hole intersected IOCGU (Olympic Dam-style) variably altered veined, brecciated, weakly mineralised volcanic rocks and sediments over 240 m. The most altered rocks are now dominated by a hematite, carbonate, sericite, chlorite and sulphide (dominantly pyrite, but with minor chalcopyrite) mineral assemblage.

The importance of the intersection in VUD 001 is highlighted by the size and strength of the associated very large, untested gravity anomaly, associated magnetic anomalies (Figure 2) and an interesting seismic response.

Assay results for VUD 001 confirm the IOCGU-style of the discovery at Vulcan. As mentioned in Tasman's announcement on 10th November, intersection of IOCGU-style alteration, brecciation and mineralisation, high concentrations of copper and associated metals were not expected in this hole as it had been drilled on the far northwestern margin of the system, based on the gravity anomaly (Figure2).

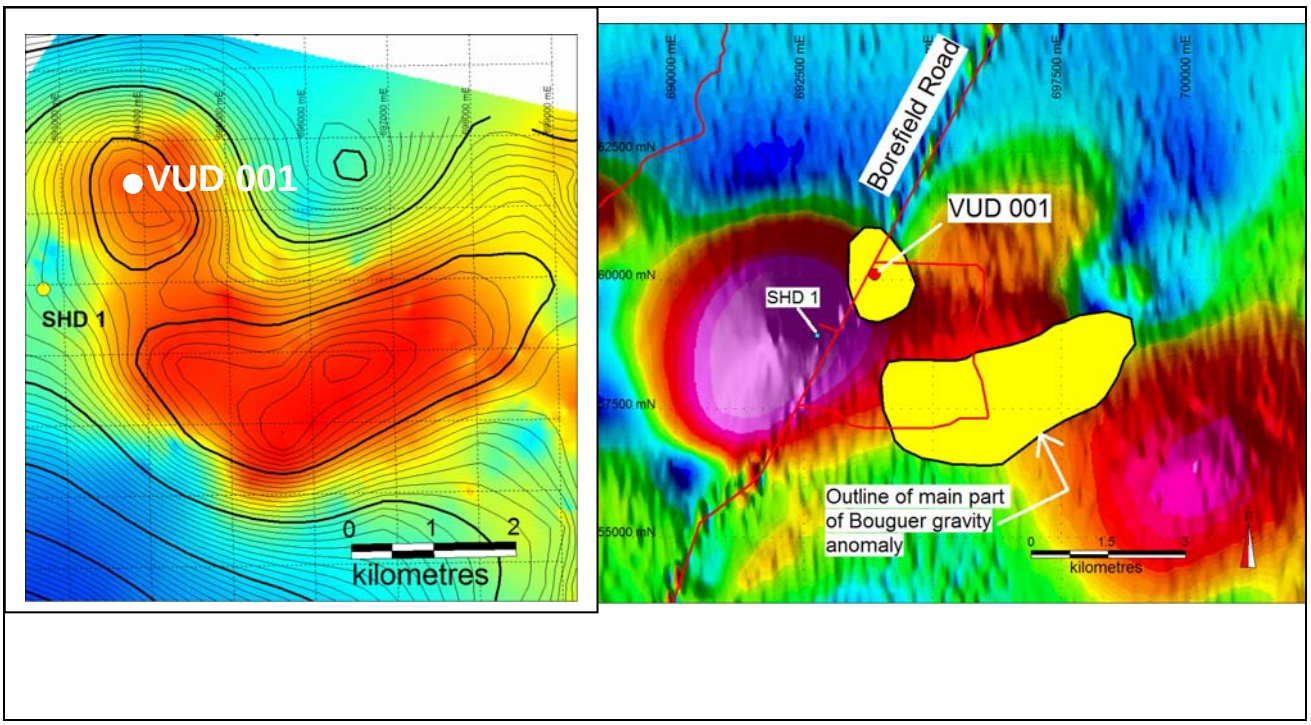


Figure 2: Vulcan Project: Bouguer gravity plan (left) and TMI magnetics-analytic signal (right). Heavy gravity contour lines are milligals and lighter contour lines 0.1 milligals. The location of VUD 001 shown on both plans. A simplified outline of the main part of the gravity anomaly (shown yellow) has been superimposed on the TMI magnetics.

Assay results have been received for the whole drill hole, and average assays for the key IOCGU associated elements in the more strongly mineralised (upper) portion of drill hole VUD 001 are listed below:

From (m)	To (m)	Thickness (m)	Copper (%)	Gold (g/t)	U_3O_8 (kg/t)	Silver (g/t)	Iron (%)	Sulphur (%)
907	960	53	0.10	0.04	0.021	0.4	11.6	1.7
including								
928	929	1	0.38	0.18	0.018	0.4	15.9	2.4
and								
936	946	10	0.20	0.05	0.047	0.5	9.4	3.4

A review of all available assays in the hole shows that there is a strong correlation between these specific IOCGU elements, confirming the original IOCGU mineralising processes. In addition, anomalous levels of other elements such as arsenic, barium, fluorine and molybdenum are present at Vulcan.

Interpretation

Based on available geophysical data and comparison with systems such as Olympic Dam, VUD 001 appears, as alluded to in the Announcement on 10th November, to have "clipped" the northwestern corner of a potentially much larger system. Tasman has prepared a schematic plan and cross-section illustrating this (see Figures 3 and 4).

The mineralogy, grade and style of the mineralisation in VUD 001 is believed to be more characteristic of the deeper and more lateral portions or zones of an Olympic Dam-type system.

- At Olympic Dam, higher-grade copper-uranium mineralisation (dominated by a copper sulphide mineralogy relatively rich in bornite and/or chalcocite) and the highest-grade gold zones are spatially located towards the central and upper parts of the deposit.
- Lower grade mineralisation at Olympic Dam is characterised by a sulphide mineralogy dominated by pyrite and chalcopyrite (and a lack of the sulphides bornite and chalcocite) and relatively high levels of carbonate minerals such as siderite. This mineralisation is located towards the deeper and more peripheral parts of Olympic Dam.

In VUD 001 at Vulcan, the sulphide mineralogy is essentially pyrite with lesser chalcopyrite, and carbonate (mostly siderite), implying that, by analogy with Olympic Dam, further drilling at Vulcan should focus on the central parts of the system or gravity anomaly, as shown schematically in Figures 3 and 4.

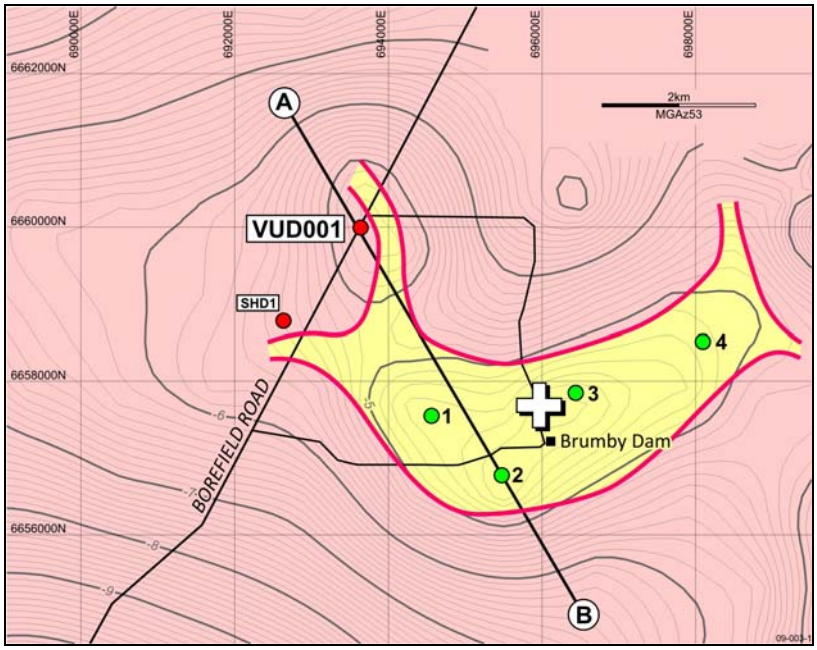


Figure 3: Schematic geological plan of Vulcan prospect, superimposed on bouguer gravity contours, based on the results of hole VUD 001 and available geophysical data. The outer host rocks are shown pink, and the potential Vulcan IOCGU system is yellow. The location of the cross section A – B (see Figure 4) and drill holes VUD 001 and SHD 1 are shown. Possible follow up holes are shown in green. Bouguer gravity contours are in milligals and 0.1milligals.

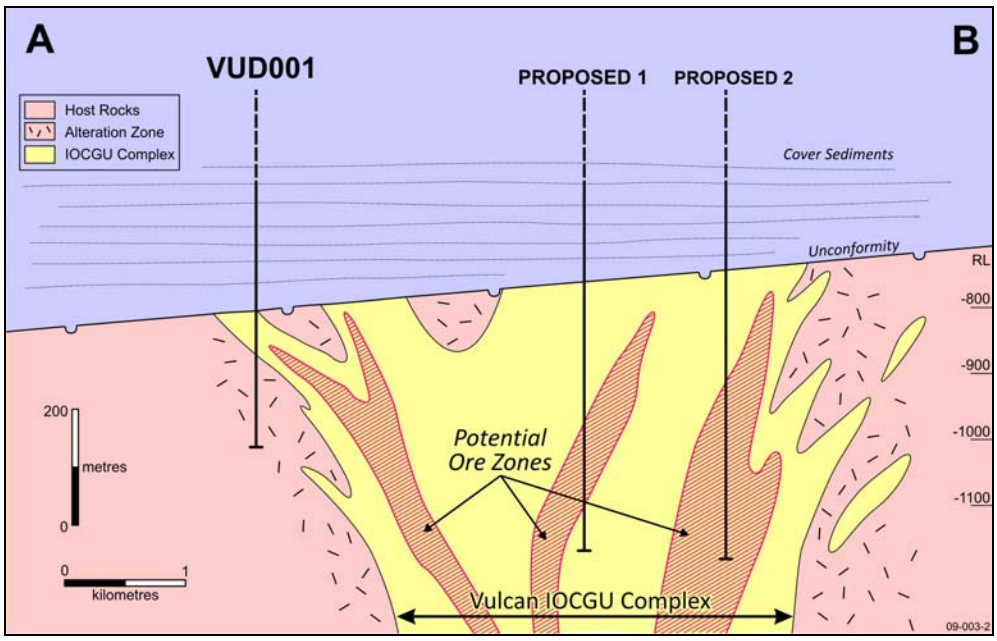


Figure 4: Interpretative (model) geological cross section of the potential IOCGU system or complex along line A – B as shown in Figure 3. Note the location of drill hole VUD 001 on the outer margin of the interpreted IOCGU system, two of the proposed drill holes within the main part of the system and the interpreted ore zones.

Future Strategy and Program

Tasman's future strategy is as follows:

- Conduct detailed geophysical modelling and further gravity data acquisition – currently underway.
- Conduct further geological work on VUD 001 drill core (eg. petrology, HyLogger^{TM} scanning) – currently underway.
- Define targets for drilling within the main gravity anomaly, based on geophysical work, geological interpretations and IOCGU ore deposit models – early in 2010. Notional sites for follow up holes are shown in Figures 3 and 4.
- Resolve heritage issues with a view to resumption of drilling in early- to mid- 2010. This process is already underway, running concurrently with the steps mentioned above.

GOLD EXPLORATION: SOUTH AUSTRALIA

Parkinson Dam Epithermal Gold-Silver (Lead-Zinc) Project (Tasman 100%)

Tasman discovered new, outcropping epithermal-style gold and silver mineralisation in 2005, and later hit very encouraging, high grade gold and silver mineralisation in vertical hole **PD 63 (21m at 21g/t Au and 83g/t Ag, including 9m down hole at 31g/t Au and 152g/t Ag)**. Follow up drilling close to PD 63 (within about 40m) confirmed the continuity and orientation of the main high grade structure targeted, but the intersections obtained were narrower and lower grade (e.g. 1.7g/t Au and 3.2g/t Ag over 1m down hole in PD 71).

No work was conducted at Parkinson Dam during the quarter, however further drilling, designed to follow up encouraging thick zones of associated lead-zinc mineralisation hit in previous drilling is being considered. At least one deep hole may be drilled down dip of holes PD 70 (50m @0.9% Zn, 0.4% Pb) and PD 71 (55m @0.6% Pb and 0.4% Zn).

GOLD - BASE METAL EXPLORATION: QUEENSLAND

Mirrica Project (Tasman 100%)

The Mirrica project is located on the eastern edge of the Simpson Desert approximately 350 km south-southwest of Mt Isa. Tasman's principal exploration target is Mesoproterozoic gold and/or base metal mineralisation under relatively thin cover rocks of the Eromanga Basin and Simpson Desert sands. Tasman has previously conducted a RAB drilling programme, but no field exploration was conducted during the quarter.

Krucible Metals Ltd. have reported very encouraging results from exploration an adjacent tenement to the north of Tasman's Mirrica tenements. During the quarter Krucible reported results from its initial drilling programme at Champ Prospect, which included an intersection of 27m at 0.40% Cu from 9m (including 3m at 2.3% Cu from 12m). The mineralisation appears to be related to fault(s), which are interpreted to continue within Tasman's tenements.

Tasman is considering a program of geochemical exploration across the interpreted strike extensions of the structures into Tasman's adjoining tenements.

Queensland Mines and Energy have accepted Tasman's application for an additional EPM in the area.

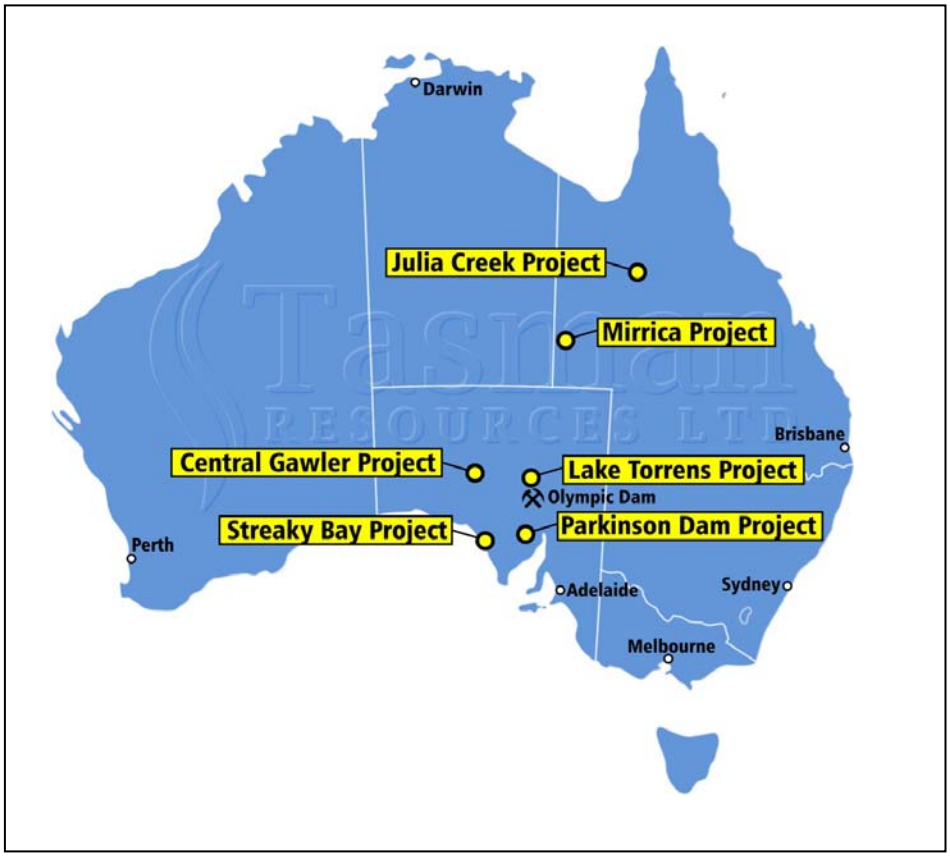


Figure 5: Location of Tasman Project Areas in South Australia and Queensland

Outside interests in Tasman's 100%-owned mineral tenements:

Fission Energy Ltd has the right to explore for uranium in all Tasman's South Australian tenements except for (a) basement-hosted mineralisation within the Lake Torrens Project and (b) part of the Parkinson Dam Project, where Fission farmed out its uranium exploration rights to Mega Hindmarsh Ltd.

Flinders Mining Ltd has a joint venture agreement with Tasman to explore for diamonds within all Tasman's South Australian granted tenements except for the Parkinson Dam Project.

CORPORATE

Investment in Eden Energy Ltd

Tasman has a 17.8% interest in alternative energy company Eden Energy Ltd (ASX: EDE), on a fully diluted basis as at 31st December 2009.

India

Eden completed the first three sales of its Optiblend® dual fuel system in Assam in north-eastern India, where low cost natural gas is readily available. Installation of these three systems has been completed and they are now operational.

Preliminary approvals were received for a 50 bus Hythane® demonstration project in Mumbai.

Indian authorities have adopted 18% hydrogen / 82% natural gas (by volume) as the national standard for Hythane® (HCNG).

A joint venture is under negotiation for up-scaling new pyrolysis technology to separate methane into hydrogen and solid carbon.

United States

The San Francisco Airport Hythane® Project is progressing, with the hydrogen and Hythane station on target to become operational by mid-late 2010.

The Hempstead Hythane® station near New York is now operational.

Initial US marketing has attracted strong interest from dealers of a major engine manufacturer in Hythane Company's OptiBlend Dual Fuel Kit and the first US installation was completed.

UK & Australia

A farm-out Agreement was concluded with Origin Energy Ltd to farm into Eden's Cooper Basin Geothermal Licence GEL 185 in SA.

Negotiations have commenced with potential joint venture partners for Eden's coal bed methane, natural gas and geothermal energy projects.

The UK Coal Bed Methane joint venture completed the initial review, and plans are being considered to develop several pilot production wells over the next three years.

Investment in Fission Energy Ltd

Tasman has a 28.1% interest in uranium explorer and potential nickel-cobalt producer Fission Energy Ltd (ASX: FIS), on a fully diluted basis as at 31st December 2009.

Mt Thirsty Nickel-Cobalt Project (refer Fission Energy Ltd Quarterly Report for full details)

Fission Energy owns 50% of the Mt Thirsty Nickel-Cobalt Project in WA, with the other 50% held by Barra Resources Limited (ASX: BAR).

Mt Thirsty Oxide Deposit

Mt Thirsty has a current JORC Indicated Resource of 14.8 million tonnes at 0.14% Co, 0.59% Ni and 0.99% Mn and a JORC Inferred Resource of 14.2 million tonnes at 0.11% Co, 0.52% Ni and 0.77% Mn over an apparent strike of 1.3 kilometres and a width of around 800 metres.

Consultants from Independent Metallurgical Operations Pty Ltd (IMO) are conducting further detailed metallurgical test work and evaluation, and a program to facilitate timely preparation of a feasibility study.

Mt Thirsty – Nickel Sulphide Exploration

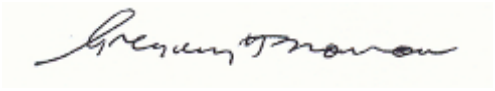
Exploration for nickel sulphides continued through the quarter. A further two diamond drill holes (MTDD010 and MTDD011) were drilled to test the contact between the main ultramafic units and the interpreted footwall contact to the west of the Mt Thirsty oxide deposit.

MTDD010 failed to reach the contact, being terminated in thick ($120m^{+}$) pegmatite. Relatively thick flows of olivine-cumulate ultramafic rocks were intersected however, and a narrow zone of stringer and disseminated sulphides was hit at 276m.

MTDD011 was collared a further 420m south, and intersected thicker, olivine cumulate ultramafics and the target footwall contact at 478m. A 10m thick zone of weak disseminated sulphides occurs immediately above the contact, and a narrow, 0.45m zone of stringer and disseminated sulphides were intersected higher in the hole at 312.5m.

Early next quarter it is planned to deepen an earlier diamond drill hole (MTDD008) which was drilled in 2009, and hit narrow intervals containing nickel sulphides, but did not reach the footwall target zone due to the limitations of the drill rig.

At Woodcutters prospect, a second diamond drill hole (WCDD002), designed to test a strong off-hole conductor in the earlier hole WCDD001 was drilled. The hole intersected a thick ultramafic sequence and minor pegmatite. No sulphide mineralisation was intersected, but a 2m thick black shale, believed to be the source of the conductor was intersected at the footwall contact at 241.9m. No significant assays were returned.



Greg Solomon
Executive Chairman

The interpretations and conclusions reached in this report are based on current geological theory and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for complete certainty. Any economic decisions that might be taken on the basis of interpretations or conclusions contained in this report will therefore carry an element of risk.

The information in this announcement, insofar as it relates to Mineral Exploration activities, is based on information compiled by Robert N. Smith and Michael J. Glasson, who are members of the Australian Institute of Geoscientists, and who have more than five years experience in the field of activity being reported on. Mr Smith and Mr Glasson are full-time employees of the company. Mr Smith and Mr Glasson have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Smith and Mr Glasson consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

It should not be assumed that the reported Exploration Results will result, with further exploration, in the definition of a Mineral Resource.

Rule 5.3

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

FISSION ENERGY LTD

ABN

49 119 057 457

Quarter ended ("current quarter")

31 December 2009

Consolidated statement of cash flows

	Cash flows related to operating activities	Current quarter $A'000	Year to December (6 months) $A'000
1.1	Receipts from product sales and related debtors	26	33
1.2	Payments for (a) exploration and evaluation	(364)	(654)
	(b) development		
	(c) production		
	(d) administration	(168)	(347)
1.3	Dividends received		
1.4	Interest and other items of a similar nature received	20	37
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid – GST Refunds Received	39	64
1.7	Other (provide details if material)-		
	Net Operating Cash Flows	(447)	(867)
	Cash flows related to investing activities		
1.8	Payment for purchases of: (a)prospects		
	(b)equity investments	(405)	(405)
	(c)other fixed assets	(1)	(1)
1.9	Proceeds from sale of: (a) prospects		
	(b)equity investments		
	(c) other fixed assets		
1.10	Loans to other entities	3	30
1.11	Loans repaid by other entities		
1.12	Other (provide details if material)		
	Net investing cash flows	(403)	(376)
1.13	Total operating and investing cash flows (carried forward)	(850)	(1,243)

1.13	Total operating and investing cash flows (brought forward)	(850)	(1,243)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	(73)	1,147
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) Share Application Monies		
	Net financing cash flows	(73)	1,147
	Net increase (decrease) in cash held	(923)	(96)
1.20	Cash at beginning of quarter/year to date	3,067	2,240
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	**Cash at end of quarter**	2,144	2,144

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	185
1.24	Aggregate amount of loans to the parties included in item 1.10	0

1.25 Explanation necessary for an understanding of the transactions

Placement fees were paid during the quarter to a company of which Mr GT Le Page and Mr James Richardson are directors
Management Fees, as per agreement, were paid during the quarter to a company of which Mr GH Solomon and Mr DH Solomon are directors.
Legal Fees were paid during the quarter to a firm of which Mr GH Solomon and Mr DH Solomon are partners.
Directors Fees and Superannuation paid during the period.
Reimbursement of bona-fide expenses.

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

Not applicable

Financing facilities available

Add notes as necessary for an understanding of the position.

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

Estimated cash outflows for next quarter

		$A'000
4.1	Exploration and evaluation	300
4.2	Development	
	Total	**300**

Subsequent to end of quarter additional capital has been raised to fund part of this expenditure.

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	2,144	3,067
5.2	Deposits at call	-	-
5.3	Bank overdraft	-	-
5.4	Other (provide details)	-	-
	Total: cash at end of quarter (item 1.22)	2,144	3,067

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	Preference +securities (description)	NOT APPLICABLE			
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3	**+Ordinary securities**	126,930,258	126,930,258		
7.4	Changes during quarter (a) Increases through issues (b) Increase release from Escrow (b) Decreases through returns of capital, buy-backs	1,400,000	1,400,000	$0.16 per share (with 1 free attaching option for every 2 shares)	$0.16 per share
7.5	**+Convertible debt securities** (*description)*	NOT APPLICABLE			
7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	**Options**	1,000,000 44,824,992 1,000,000 511,508 3,000,000 500,000	NIL 44,824,992 NIL NIL NIL NIL	*Exercise price* 20 cents 20 cents 20 cents 20 cents 13.75 cents 19 cents	*Expiry date* 18 June 2010 28 February 2011 31 March 2011 16 April 2012 20 Nov 2012 26 May 2013
7.8	Issued during quarter	700,000 3,000,000	700,000 3,000,000	20 cents 13.75 cents	28 February 2011 20 Nov 2012
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	**Debentures** *(totals only)*	NOT APPLICABLE			
7.12	**Unsecured notes** *(totals only)*	NOT APPLICABLE			

Compliance statement

1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).

2 This statement does give a true and fair view of the matters disclosed.

AARON PHILIP GATES
COMPANY SECRETARY / CFO
Date: 27 January 2010

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.

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