ACN 119 057 457

ASX QUARTERLY REPORT

FOR PERIOD ENDED 30TH SEPTEMBER 2009

HIGHLIGHTS

MT THIRSTY PROJECT (WA)

Nickel Sulphide Exploration

- **Strongly anomalous nickel concentrations associated with disseminated and stringer sulphides in several zones above the interpreted basal footwall contact in hole MTDD008.**
- **Downhole EM defines interesting off hole EM conductor at Woodcutters prospect.**
- **Second nickel sulphide drilling program in progress.**

Mt Thirsty Co-Ni-Mn Oxide Resource

- **Metallurgical testwork continues.**

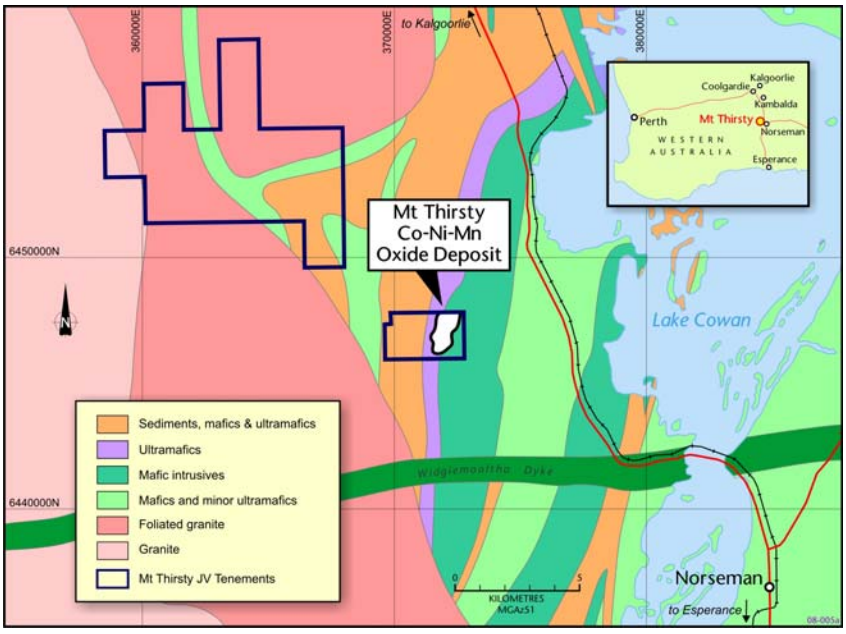

Figure 1: Mt Thirsty project location and regional geology.

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MT THIRSTY Co -Ni -Mn PROJECT (Fission 50%)

The Mt Thirsty Cobalt –Nickel -Manganese oxide project covering an area of 45km^2 is located 20km north-northwest of Norseman (Figure 1). Fission through its wholly owned subsidiary Meteore Metals Limited owns 50% of the project in joint venture with Barra Resources Limited. The Mt Thirsty deposit has the potential to emerge as a significant world cobalt supplier. Metallurgical testwork indicates that high recoveries of cobalt, nickel and manganese can be achieved through low temperature atmospheric leaching.

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

As well as the Cobalt-Nickel–Manganese oxide resource, the Mt Thirsty joint venture tenements have potential for nickel sulphide mineralisation at greater depth within the same ultramafic sequence which hosts the near surface oxide deposit.

Nickel Sulphide Exploration

Primary nickel sulphide mineralisation was discovered in the first diamond drill hole MTDD008 which was drilled in the previous quarter to 1,070m (the depth capacity of the drill rig), due to the continuing presence of sulphides. The aim was to intersect the lower basal footwall contact where the best concentration of nickel might be expected (eg. as at Kambalda).

Spot readings, using a Niton* hand held XRF device on selected pieces of core from 2cm to 5cm thick stringer veins of massive sulphide returned readings of approximately 1% nickel.

A very thick sequence of originally olivine-rich, cumulate - textured ultramafics comprising at least three separate units was intersected. These rocks contain variable amounts of disseminated, vein and stringer-style sulphide mineralisation. The lowermost ultramafic unit is at least 770m thick, however the footwall contact was not reached in the drill hole due to likely thickening of the unit.

A second drill hole was collared further up dip and to the north to test the basal footwall contact at shallower depth and also determine its attitude and hence the viability of deepening hole MTDD008 (Figure 2). Unfortunately difficult ground conditions forced the abandonment of this hole prior to reaching the footwall contact. Consideration will be given to drilling a shallower substitute hole further to the west.

The exploration strategy is based on a geological model similar to basal lava channel embayment-type structures observed at Kambalda. Basal lava channel embayments located on ultramafic-basalt contacts are a preferred location for nickel sulphide accumulations in the Kambalda region.

Assay Results, Hole MTDD008

A number of zones of sulphide mineralisation were intersected down hole in MTDD008, however the more attractive were intersected from 280m and 351m. These two zones assayed 0.30% and 0.24% Ni respectively over 9.45m and 6m down hole, which are believed to be close to true widths (refer Figure 2). Included within the lower zone is thin stringer mineralisation which assayed 0.90% Ni over 0.14m from 356.56m.

It is interpreted that these two zones may represent hanging wall - style mineralisation above the main ultramafic unit (+770m thick at Mt Thirsty), comparable to hanging wall zones in the Kambalda district. These sub-grade intersections could represent low-grade lateral extremities of significant higher-grade mineralisation, and are also positive indicators of the potential of

the sequence to host high grade nickel sulphides at the lower (basal) footwall contact.

A thin massive sulphide stringer, which contained visible nickel sulphides near the lower contact of a Proterozoic–age dyke assayed 1.2% Ni, 0.6% Cu and 0.15% Co over 6cm from 759.25m. These sulphides may have been dragged upwards from a more significant sulphide accumulation at depth on the basal contact during later emplacement of the dyke.

Ultramafic xenoliths observed in the dyke also support the postulated origin of the sulphides. The higher associated Cu and Co values in this stringer imply a different nature to the other sulphide mineralisation intersected in the hole.

Although economic nickel sulphide mineralisation has not yet been intersected, the Joint Venturers' are very encouraged by the results to date from the drilling of MTDD008. In particular:

- Nickel sulphides and low grade Ni mineralisation have been identified throughout the sequence with the better zones intersected to date occurring in hanging wall positions, with potentially the most prospective basal contact zone remaining untested.
- Discovery of a very thick (+770m thick) ultramafic unit which is most probably the basal unit sitting on the footwall contact. Thick basal ultramafic units are important ingredients in many of the major nickel sulphide deposits in WA.
- Nickel sulphides in a Proterozoic–age dyke which may have been remobilised from a mineralised basal footwall contact at depth.

Potential exists for any mineralised basal footwall contact zone to extend up dip from the area of MTDD008 to shallower depths over a prospective surface strike length of 1.8km within the joint venture tenement. The approximate position of this contact zone at surface has been identified from regional geological and geophysical data, and this contact is an important focus for the Joint Venturers' nickel sulphide exploration activity.

EM Survey Results

A down hole electromagnetic (EM) survey was completed in MTDD008. A conductor was detected near the bottom of the hole, however there was too much interference from sulphidic sediments intersected in the upper portion of the hole to determine an accurate location. Surface EM also tested the 1.8km of interpreted footwall contact zone of interest as referred to above, however no near surface conductors were located. A further 3.8km of potential footwall contact has been identified in other Joint Venture tenements 2km to the north and this will be evaluated in due course.

Diamond hole WCDD001 was completed at the Woodcutters prospect 6km further to the WNW to test an EM target, and 200m of cumulate - textured ultramafics were intersected. A downhole EM survey was conducted and an interesting off hole EM anomaly was detected which may be indicating the presence of primary nickel sulphides at depth along strike from WCDD001. A diamond drill hole to test this EM anomaly at a depth of about 350 metres is currently in progress.

Several gossanous rock-chip samples representing possible massive to disseminated nickel sulphide mineralisation associated with a basalt-ultramafic contact have been identified at Woodcutters.

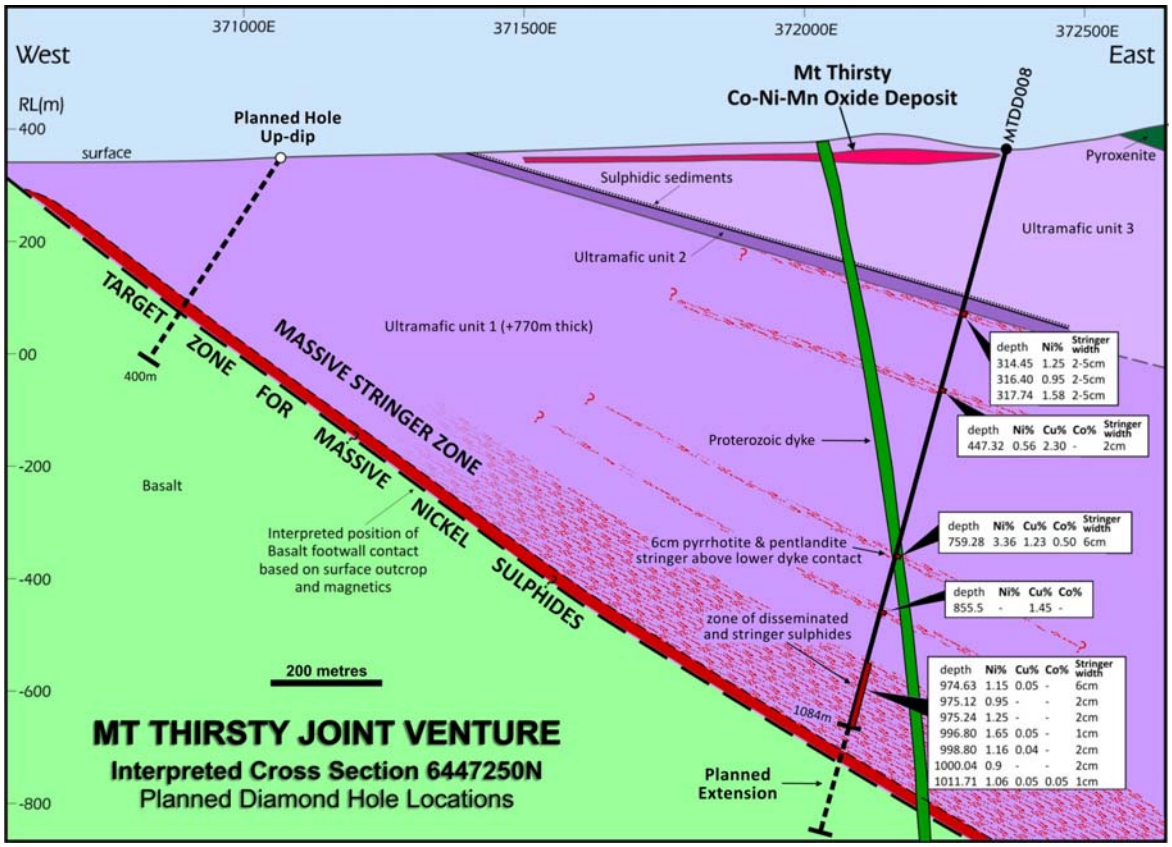


Figure 2: Mt Thirsty Interpreted East-West Geological Cross Section through drill hole MTDD008, showing spot *Niton readings of stringer sulphide veins and interpreted basal footwall target zone and planned diamond drill hole extensions.

Mt Thirsty Ni –Co- Mn Oxide Deposit

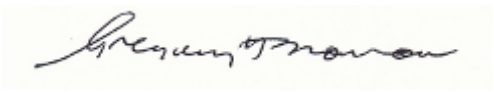
Feasibility Study

Consultants from Independent Metallurgical Operations Pty Ltd (IMO) have reviewed the previous metallurgical test work and flow sheet development. IMO have recommended further detailed test work to refine the flowsheet design. This work commenced during the quarter and should be completed by the end of the year with a view to commencing a pre-feasibility study in early 2010.

IMO were specifically selected by the joint venturers for their particular experience and expertise in the processing of nickel – cobalt oxide deposits as well as broader commercial aspects of these businesses.

CORPORATE

A placement to sophisticated investors raised $1,224,000 through the issue of 7.65 million shares at $0.16 each with a free attaching option (exercisable at 20 cents on or before 28th February 2011) for every two shares issued. The funds will be used for further nickel sulphide exploration at Mt Thirsty and ongoing metallurgical testwork.



Greg Solomon
Executive Chairman

**Note: The Niton nickel grade estimates for diamond hole MTDD008 quoted in this release have been estimated using a Niton XLT 592 portable XRF analyser. These spot estimates are indicative only and have been provided to demonstrate that some highly anomalous nickel values are present throughout the hole. Niton XRF analysis is not considered a substitute for conventional analytical methods.*

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 Michael J. Glasson and Robert N Smith, who are members of the Australian Institute of Geoscientists, both of whom have more than five years experience in the field of activity being reported on. Mr Glasson and Mr Smith are consultants. Mr Glasson and Mr Smith 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 Glasson and Mr Smith 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.

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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")

30 September 2009

Consolidated statement of cash flows

	Cash flows related to operating activities	Current quarter $A'000	Year to September (3 months) $A'000
1.1	Receipts from product sales and related debtors	7	7
1.2	Payments for (a) exploration and evaluation	(290)	(290)
	(b) development		
	(c) production		
	(d) administration	(179)	(179)
1.3	Dividends received		
1.4	Interest and other items of a similar nature received	17	17
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid – GST Refunds Received	25	25
1.7	Other (provide details if material)-		
	Net Operating Cash Flows	(420)	(420)
	Cash flows related to investing activities		
1.8	Payment for purchases of: (a)prospects		
	(b)equity investments		
	(c)other fixed assets		
1.9	Proceeds from sale of: (a) prospects		
	(b)equity investments		
	(c) other fixed assets		
1.10	Loans to other entities	27	27
1.11	Loans repaid by other entities		
1.12	Other (provide details if material)		
	Net investing cash flows	27	27
1.13	Total operating and investing cash flows (carried forward)	(393)	(393)

1.13	Total operating and investing cash flows (brought forward)	(393)	(7,464)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	1,220	1,220
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	1,220	1,220
	Net increase (decrease) in cash held	827	827
1.20	Cash at beginning of quarter/year to date	2,240	2,240
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	**Cash at end of quarter**	3,067	3,067

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	113
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

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	200
4.2	Development	
	Total	**200**

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	3,067	2,240
5.2	Deposits at call	-	-
5.3	Bank overdraft	-	-
5.4	Other (provide details)	-	-
	Total: cash at end of quarter (item 1.22)	3,067	2,240

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**	125,530,258	125,530,258		
7.4	Changes during quarter (a) Increases through issues (b) Increase release from Escrow (b) Decreases through returns of capital, buy-backs	6,250,000	6,250,000	$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 44,124,992 1,000,000 511,508 500,000	NIL 44,124,992 NIL NIL NIL	*Exercise price* 20 cents 20 cents 20 cents 20 cents 19 cents	*Expiry date* 18 June 2010 28 February 2011 31 March 2011 16 April 2012 26 May 2013
7.8	Issued during quarter	3,125,000	3,125,000	20 cents	28 February 2011
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: 22 October 2009

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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