

AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT**31st August 2010****** High Grade Nickel Assays (Hole 20) at Mt Thirsty ********New Nickel Sulphide Hit in Hole 22******Highlights**

Fission Energy Limited (ASX: FIS) and 50% Joint Venture partner Barra Resources Limited (ASX: BAR) are very pleased to announce that assays from hole MTRC020 at Mt Thirsty, which intersected nickel sulphide stringers last week (refer ASX Announcement 26 August) returned a 2m down hole intersection from 208 to 210m **averaging 5.9% nickel** (# see below), **including 1m @ 8.1% nickel**.

In addition, hole MTRC022 (located at 370,900E 6,446,517N GDA94 Zone 51), has intersected significant nickel sulphide stringers between 118 and 120m down hole, however assay results are not yet available. This intersection is about 100m up dip from the MTRC020 intersection and may be partly remobilised.

Background

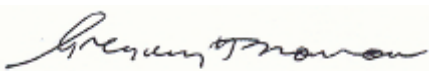
Mt Thirsty is located 20 kilometres north-northwest of Norseman in southern Western Australia (Figure 1). In May this year RC hole MTRC015 (370,970E 6,446,450N) intersected a thick zone of massive stringer nickel sulphides assaying 3.4% nickel over 6m from a down hole depth of 201 metres, adjacent to the footwall ultramafic contact within an interpreted lava channel embayment. An initial RC drilling program to follow up this intersection has just been completed. All holes reported here were inclined at 60° towards magnetic west.

Hole MTRC020 (370,970E, 6,446,500N) was drilled 50m to the north of MTRC015 on the same easting, and intersected massive nickel sulphide stringers over a 2m interval from 208 to 210m down hole. This intersection occurs at the base of a 40m thick serpentinised cumulate ultramafic, immediately above a footwall pyroxenite contact, and is most likely on the same contact as the sulphides in hole MTRC015.

Other Results

Hole MTRC 021 was drilled midway between hole MTRC015 and MTRC 022 on the same easting, confirming the presence of the favourable lava channel environment, but intersected a barren footwall contact. Hole MTRC023, drilled 50m further to the north of hole MTRC020, also intersected the channel environment but was barren of sulphides on the footwall contact. These holes however indicate that the prospective channel environment is still open to the north and it is believed that structural complexity may be affecting local nickel sulphide distribution.

The joint venture partners are extremely encouraged by the latest results and the emerging new nickel sulphide play within the Mt Thirsty project tenements.



Greg Solomon
Executive Chairman

#True width is currently uncertain but may be less than down hole width. Assays were based on 1m RC percussion samples with a 4kg split collected on site and analysed for Ni using ICP analysis.

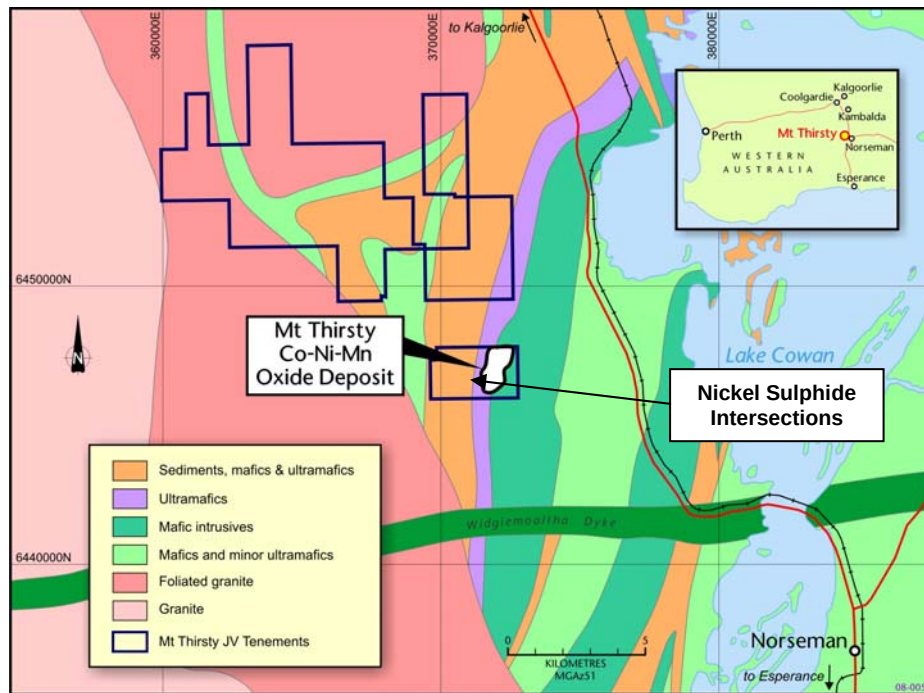


Figure 1: Mt Thirsty Location Plan and Regional Geology

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.