



# CONNECTION ASSESSMENT & APPROVAL PROCESS

## ***ASSESSMENT SUMMARY***

*Applicant: INCO Limited*

*Project: Temporary Relocation of Transformer T2 from Froid  
Stobie No. 2 Substation to INCO No. 4 Substation to  
replace the faulted Transformer T1*

*This is a repetition of work that was originally undertaken in May 2002*

***CAA ID No. 2003-EX177***

***Long Term Forecasts & Assessments Department  
Consistent Information Set Department***

*Date: 12th December 2003*

## **ASSESSMENT SUMMARY**

### **INCO Limited**

#### ***INCO Copper Cliff No. 4 Substation - Replace faulted transformer T1***

### ***1.0 GENERAL DESCRIPTION***

Transformer T1 [230CC4T1] at the INCO Copper Cliff No. 4 Substation recently failed again, and has been removed. It is now being inspected prior to being repaired. Depending on the results of this inspection, it is expected that it could be approximately 4 months before it will be ready for re-installation.

INCO has removed transformer T2 [230FS2T2] from their Frood Stobie Substation and this unit is to be installed in the position vacated by the faulted transformer T1 at the INCO No. 4 Substation.

The remaining transformer, T2 [230CC4T2], at the INCO Copper Cliff No. 4 Substation is rated at 300MVA while the T2 transformer that is to be relocated from the Frood Stobie Substation is only rated at 150MVA. Consequently, although INCO is planning to energise the relocated transformer from the 230kV system, it is not their intention to place the unit on load unless transformer T2 should fail. The LV disconnect switches on the relocated transformer are therefore to be locked open.

This arrangement is to remain in use until later this summer when rewinding of the faulted transformer is scheduled to be completed.

It is worth noting that this arrangement was adopted in 1974 when this transformer experienced a similar fault and had to be removed for rewinding.

The scheduled in-service date for the relocated unit is ***5th January 2004***.

### ***2.0 ASSESSMENT***

With the removal of transformer T2 [230FS2T2] from the Frood Stobie Substation, all of the load at this Substation will be supplied from circuit X23N.

Similarly, with transformer T1 [230CC4T1] at INCO Copper Cliff No. 4 Substation energised, but off-load, all of the load at this substation will be supplied from circuit S21N.

The appropriate transformer at the Frood Stobie Substation has therefore been selected for relocation to minimise INCO's exposure to line contingencies.

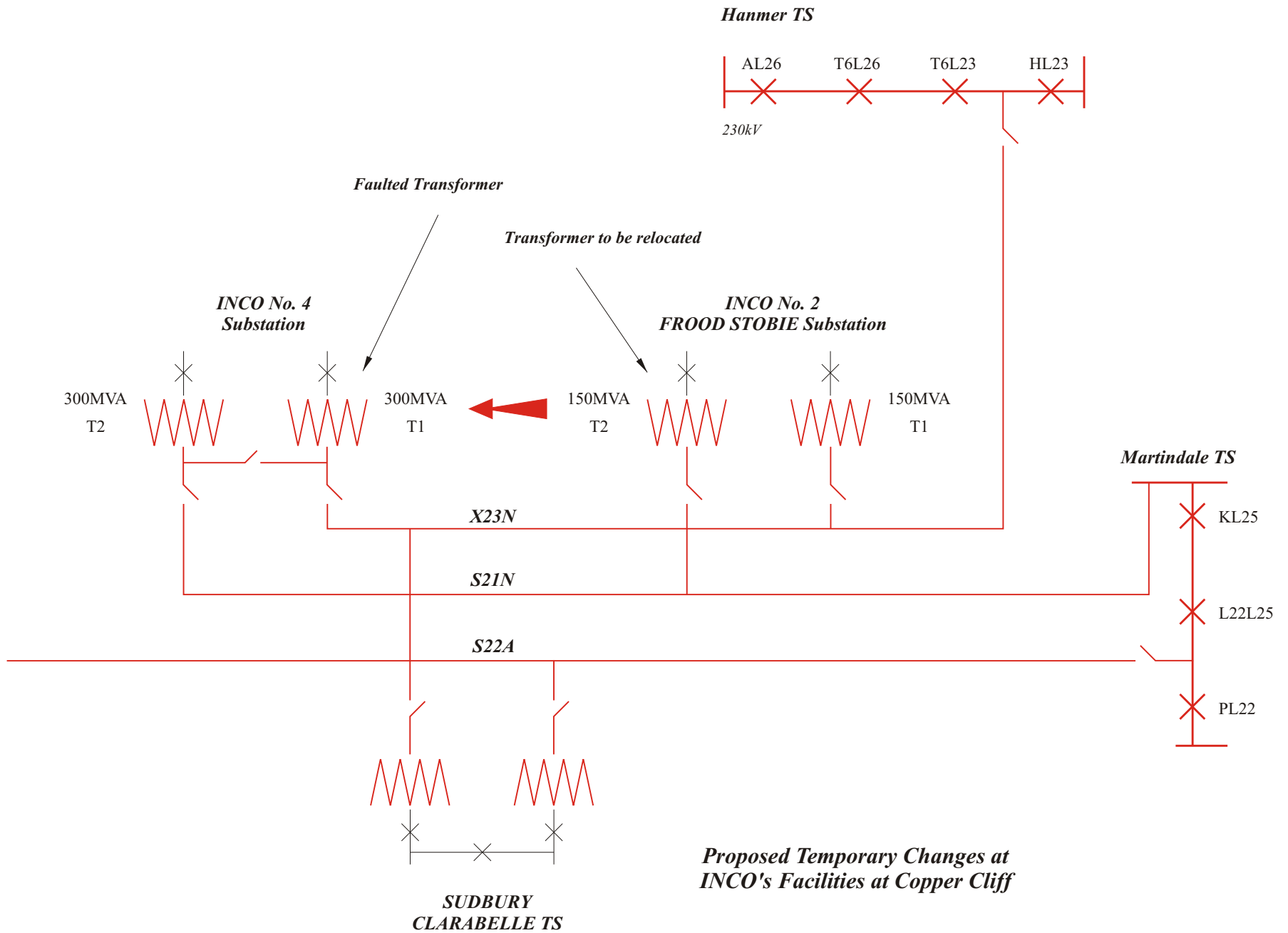
Apart from the change in loading on circuits S21N & X23N this temporary arrangement is expected to have no adverse impact on the IMO-controlled grid.

### ***3.0 CONCLUSIONS***

The only impact on the IMO-controlled grid that the temporary relocation of transformer T2 from the Frood Stobie Substation to the INCO No. 4 Substation is expected to have is a small change in the loading on circuits S21N & X23N (which is expected to be less than 100MVA).

### ***4.0 NOTIFICATION OF APPROVAL***

It is therefore recommended that a Notification of Approval of the Connection Proposal be issued.



**DIAGRAM 1**

2nd May 2002