

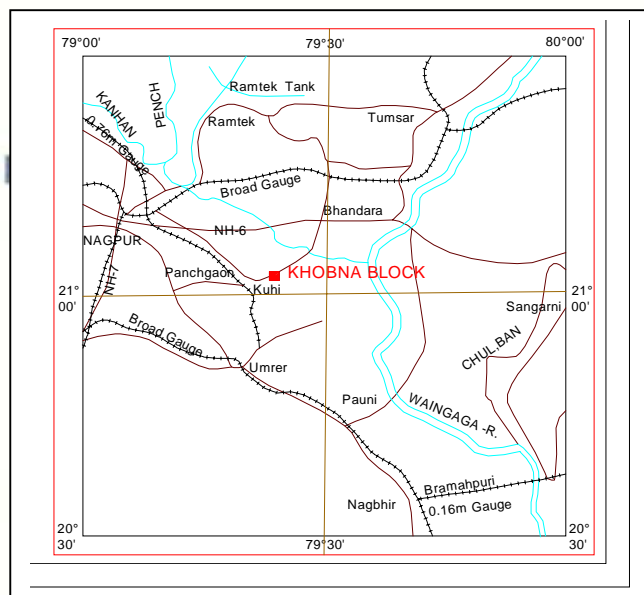


BRGM - MECL

TIN TUNGSTEN COLLABORATIVE PROGRAMME



EXECUTIVE SUMMARY



**PRE-FEASIBILITY REPORT
ON
KHOBNA TUNGSTEN DEPOSIT
DIST. NAGPUR, MAHARASHTRA, INDIA**

D - 2 STAGE

VOL. I : TEXT & ANNEXURES

MAY, 1991

**KHOBNA TUNGSTEN DEPOSIT
DISTRICT: NAGPUR, MAHARASHTRA.**

EXECUTIVE SUMMARY

1.0 LOCATION

The Khobna tungsten deposit is favourably located 45kms south west of Nagpur in Maharashtra. The nearest railway station is at Nagpur.

2.0 GEOLOGY AND STRUCTURE

Geologically the tungsten mineralisation occurs in the Northwestern part of the Proterozoic Sakoli basin. The mineralization, predominantly sheelite with a minor proportion of wolframite, is confined to steeply dipping greisen zones with swarms of tourmaline veins, sub-parallel to the host rock viz quartz chlorite mica schist.

3.0 MINERALISATION

Tungsten mineralisation is associated with greisen veins cutting across schist country rock, restricted to 25 to 50m. wide vein swarm called “Main Greisen zone” located within 100m. from the contact of a granitic intrusive body. Two types of greisen veins are present viz. tourmaline rich and quartz rich greisen, the tungsten mineralization is observed in both types though quartz rich greisen veins appear to carry slightly higher values. The main lenses have been explored by close spaced drilling and the main lens has been tested by 3 deep pits to ascertain the continuities of the mineralization, establishing the relationship between oxidized and primary zones and to collect large quantity of bulk samples for ore beneficiation studies.

4.0 QUANTUM OF WORK

MECL has carried out 6221m of drilling and deep pitting of 12m in one pit covering strike length of 800meter. Boreholes were drilled at about 100 & 120 m strike interval.

5.0 ORE RESERVES ESTIMATION

Insitu geological reserves at 0.1% WO₃ cutt off, down to a depth of 195m. from surface, are estimated at 3.36 million tones at 0.334% WO₃ covering 800m strike length in two mineralised zones.

Semi-pilot scale beneficiation studies have given encouraging results and the BRGM and IBM tests have clearly established the amenability of the ore to produce marketable scheelite concentrate of 65-73% WO₃, with recoveries varying from 55% to 75% by standard gravity, flotation, and magnetic separation techniques.

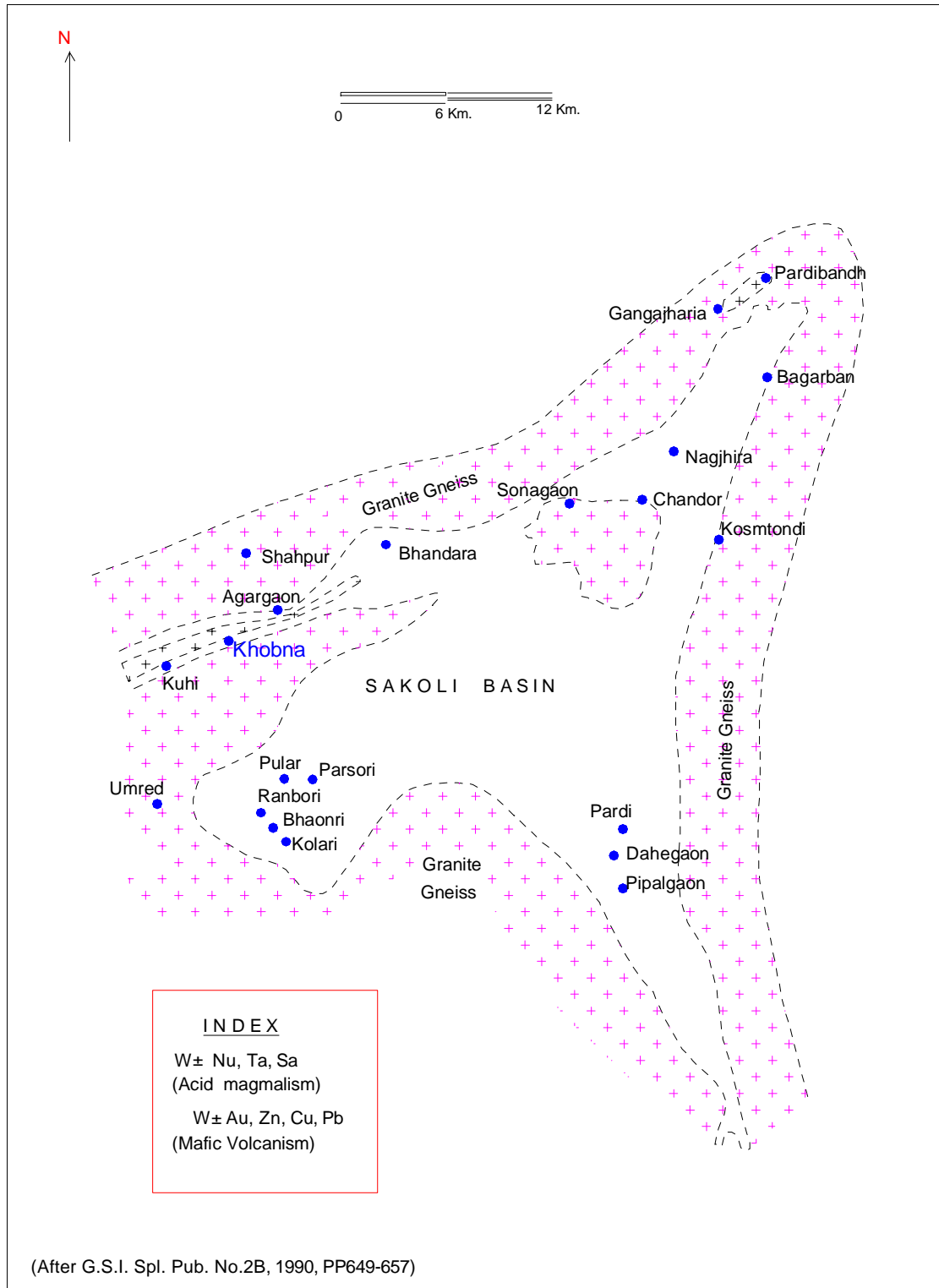
Two beneficiation plant options were considered, which is not uncommon at this pre-feasibility level. BRGM plant option is leading to higher plant recoveries, but with higher capital (Rs. 5.62 crores) and operating cost (Rs. 120 per tonne). It also includes several features presently not available in India (Rs. 60 lakhs of foreign exchange component). The IBM plant option is leading to lower plant recoveries, but with lower capital (Rs 3.84 crores) and operating cost (Rs 332 per tonne) and is based entirely on equipments available in India. The cost figures reported in the executive summary of report, submitted in May 1991.

At 300 tpd capacity, the project would produce an average of 240 to 290 tonnes per year of scheelite concentrate at a grade between 65% to 70% WO₃.

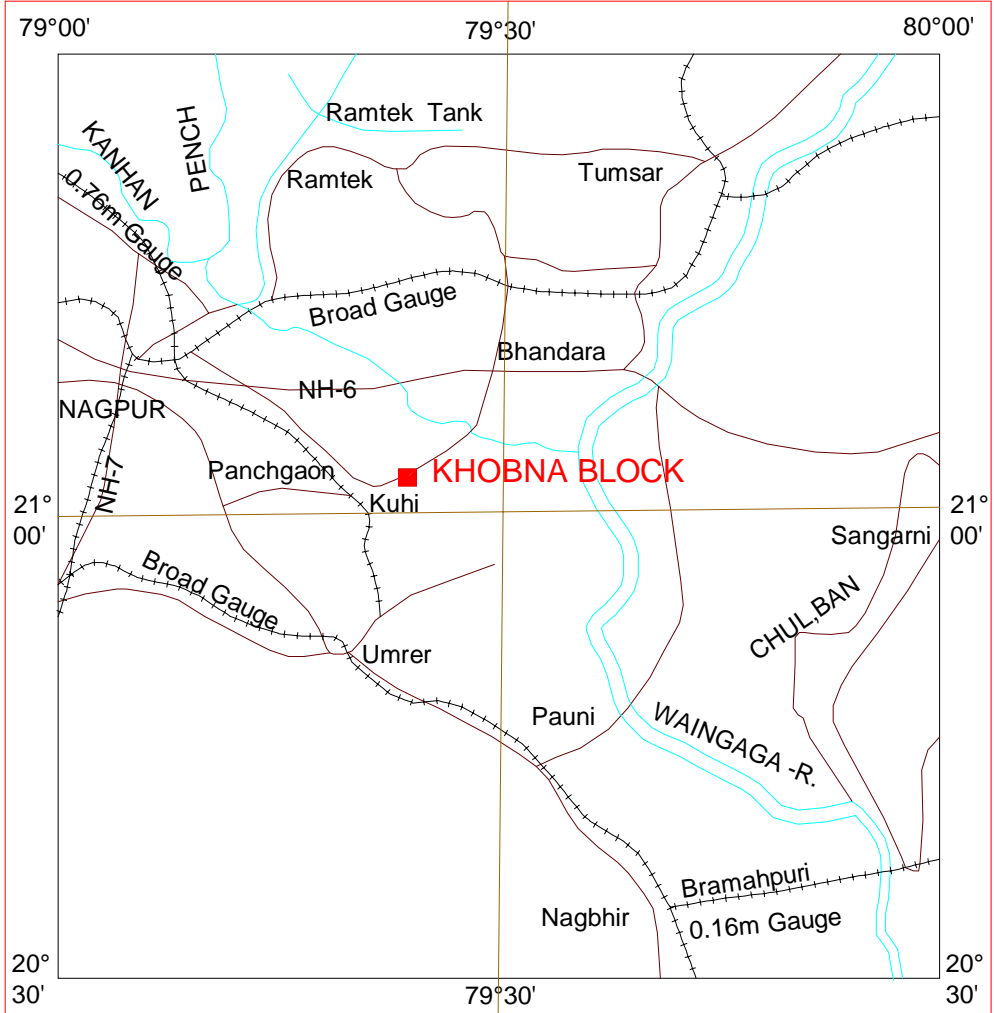
This deposit has been placed under Category 'A' of UNFC 221.

The total exploration cost of the report is Rs 246.18 Lakhs.

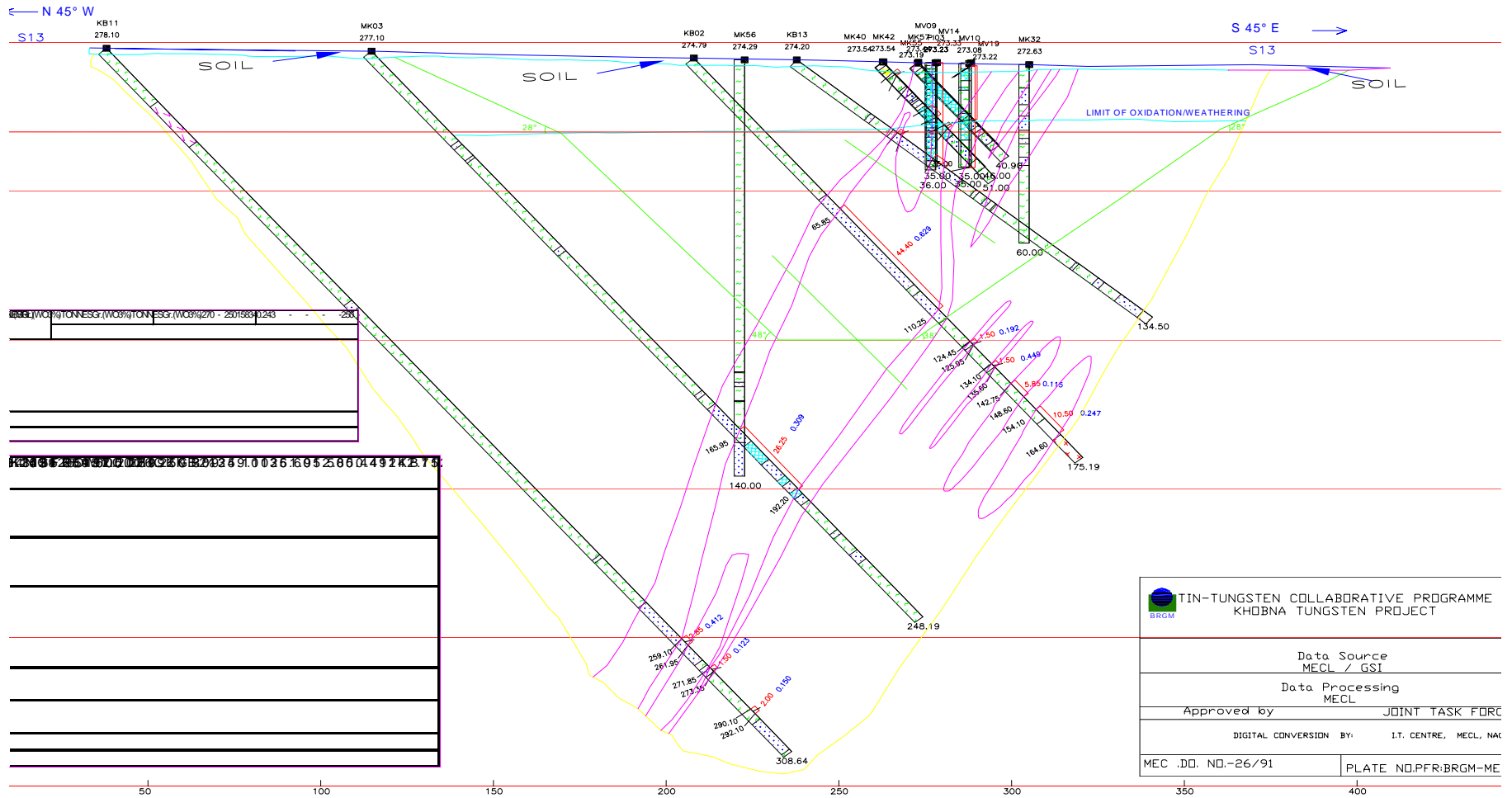
REGIONAL GEOLOGICAL MAP OF SAKOLI BASIN, MAHARASHTRA



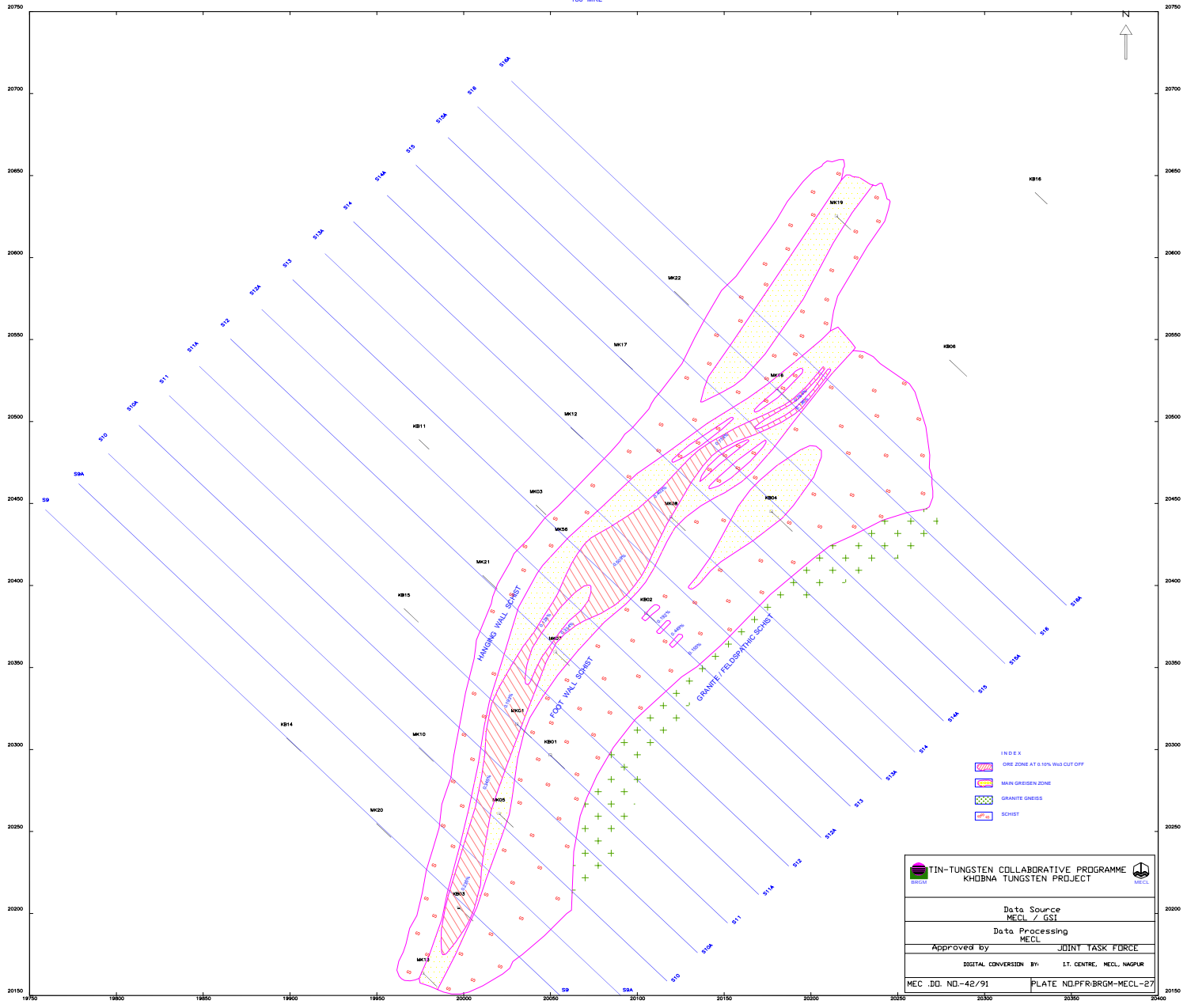
LOCATION MAP OF KHOBNA BLOCK



CROSS SECTION OF KHOBNA TUNGSTEN DEPOSIT
(SECTION S-13)
(R.F. 1:1,000)



KHOBNA TUNGSTEN DEPOSIT
Level plan - Scale 1:1000
180 MRL



- INDEX
- ORE ZONE AT 10% W&C CUT OFF
 - MAIN GREISEN ZONE
 - GRANITE GNEISS
 - SCHIST

TIN-TUNGSTEN COLLABORATIVE PROGRAMME KHOBNA TUNGSTEN PROJECT	
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Data Processing	MECL
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