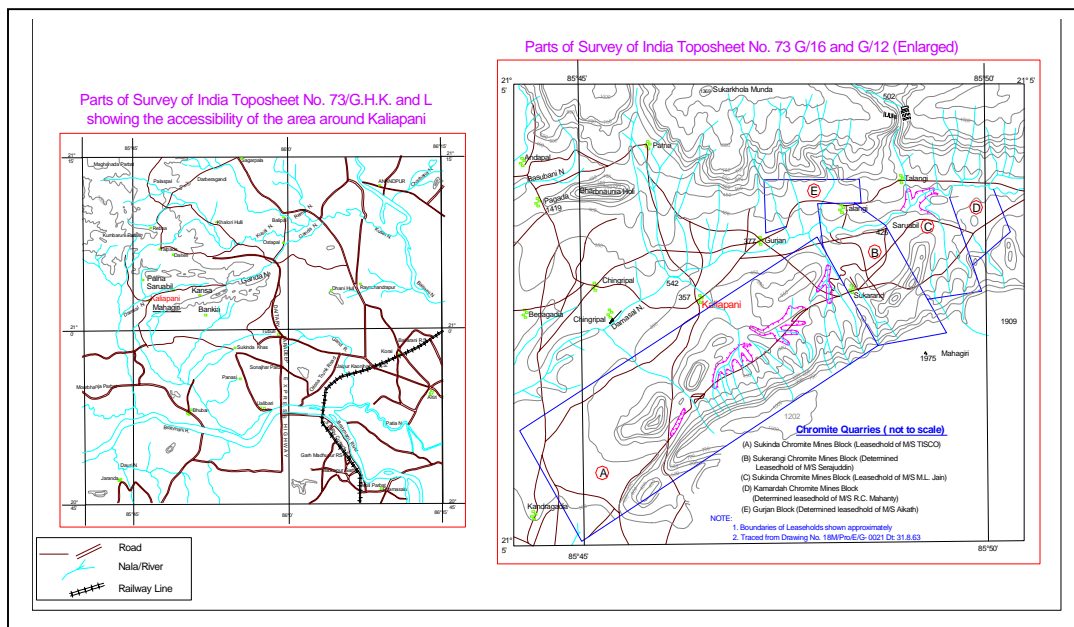


EXPLORATION NOTE ON NICKEL IN KALIAPANI SECTOR OF SUKINDA BLOCK, DISTRICT - CUTTACK, ORISSA.

EXECUTIVE SUMMARY



MINERAL EXPLORATION CORPORATION LIMITED
(A Government of India Enterprise)
SEMINARY HILLS, NAGPUR
MARCH, 1977

EXPLORATION NOTE ON NICKEL IN KALIAPANI SECTOR OF SUKINDA BLOCK, DISTT. CUTTACK, ORISSA.

EXECUTIVE SUMMARY

1.0 LOCATION

Nickle Ore deposit of Kaliapani Sector of Sukinda Valley, Orissa was investigated by Geological Survey of India. The investigation was taken over from the GSI on 27th March, 1973 by MECL.

The area is bounded by North Latitude 21° 01' to 21° 04' and East Longitude 85° 45'. The are falls in the Toposheet No.73 G /16. The area is connected by 34 kms tarred road with Jaipore Keonjhar road.

2.0 GEOLOGY AND STRUCTURE

In general the topography of the area is plane with a few rolling knolls and low ridges rising 10 to 30 mtrs. from the surrounding level in the south and south eastern part of the sector. The area is mostly covered with soil and laterite. On the basis of drill hole data following lithological successions has been established in the Kaliapani Sector.

Laterite Soil

Laterite

Disintegrated laterite

Limonitic rock with chromite lenses

Silicified rock (cherty rock)

Talc-serpentine rock

Serpentinite, Dunite-peridotite with chromite

3.0 MINERALISATION.

Although nickel is widely distributed in ultramaphites and associated overburden, high values of nickel are found only in limonitic rock. On the basis of analytical data the ore zone can be broadly divided into :

- i) Central part with high values of nickel and
- ii) Peripheral silicious part with low nickel values.

4.0 QUANTUM OF WORK DONE

In the course of exploration 32 boreholes aggregating 1458.40 mtrs. were drilled over an area of about 1.50 sq.km. 1167 samples (including 115 duplicate samples) were analysed for nickel and cobalt content.

5.0 ORE RESERVE ESTIMATION

The reserves has been estimated by cross section method a summarized statement of Category-wise and cut-off wise reserves for nickel is given in the table below:

Category-wise and cut-off wise reserves for nickel

Category of reserves	Cut-off Grades	Area of Ore Zone in sq.km.	Average Grade (%) (Ni)	Gross Reserves in million tones
Probable	a. 0.90% Ni	1.051	1.09	25.238
	b. 0.70% Ni	1.051	0.99	34.961
	c. 0.50% Ni	1.051	0.87	53.322
Possible	a. 0.90% Ni	0.32	1.07	6.278
	b. 0.70% Ni	0.32	1.01	8.064
	c. 0.50% Ni	0.32	0.91	11.274

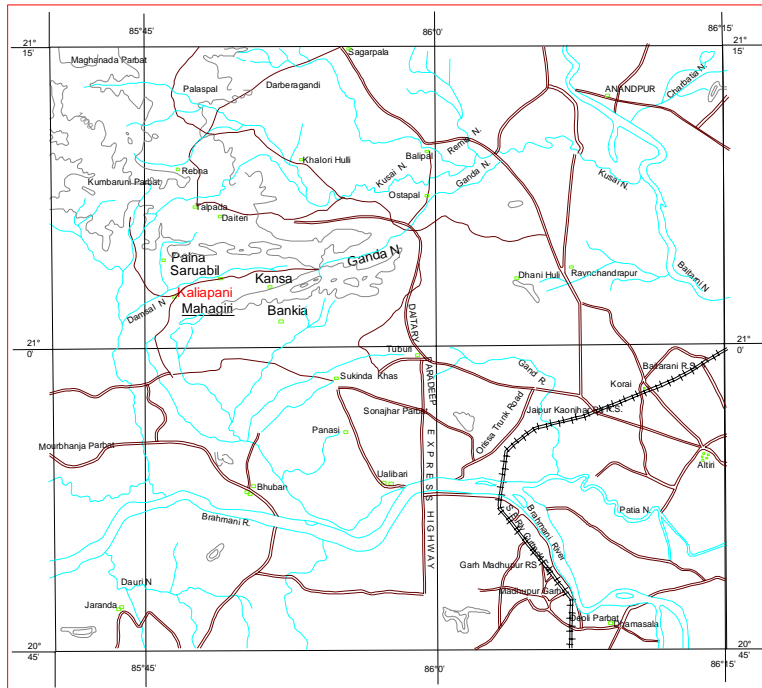
The Deposit has been classified as Category 'D' of UNFC 332.

The Total Cost of Exploration is Rs. 10.77 Lakhs.

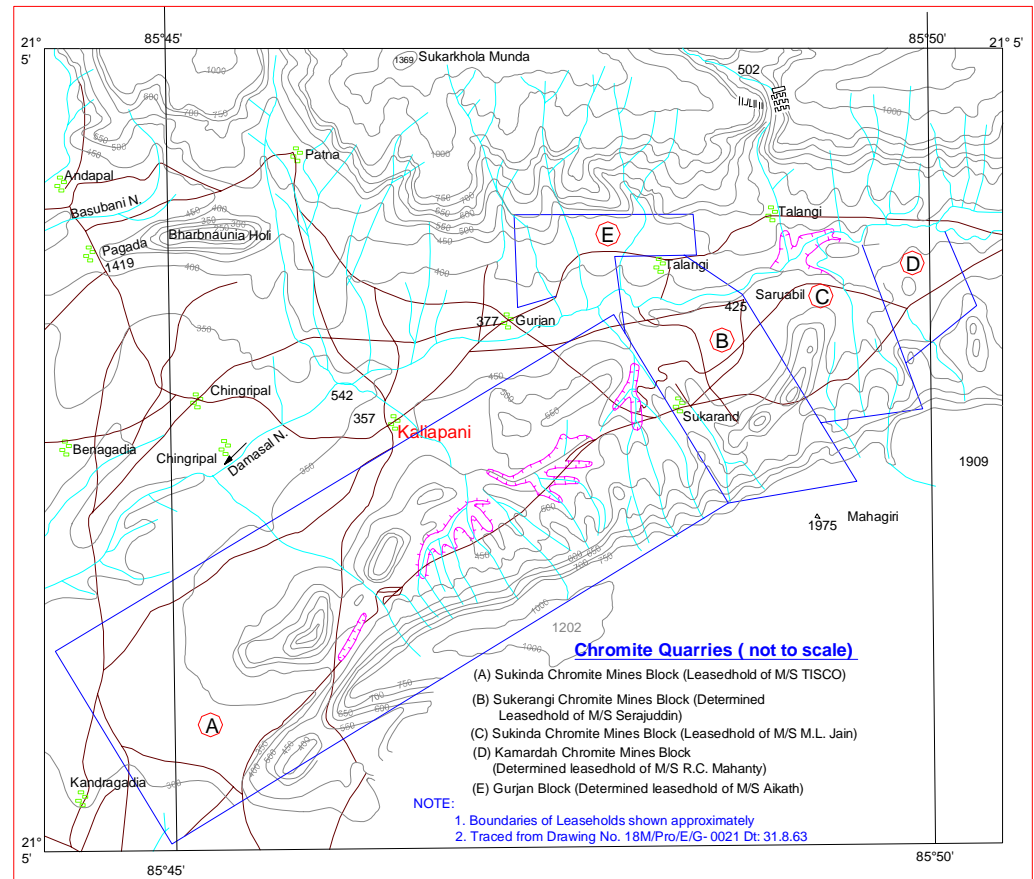
LOCATION MAP OF KALIAPANI BLOCK

MINERAL EXPLORATION CORPORATION LIMITED SUKINDA NICKEL INVESTIGATION LOCATION PLANS

Parts of Survey of India Toposheet No. 73/G.H.K. and L showing the accessibility of the area around Kaliapani



Parts of Survey of India Toposheet No. 73 G/16 and G/12 (Enlarged)



GEOLOGICAL CROSS SECTION

SECTION ALONG BOREHOLES SHOWING THICKNESS AND AVERAGE GRADES AT VARIOUS CUT - OFFS SUKINDA NICKEL INVESTIGATION , KALIAPANI SECTOR

