

GEOLOGICAL REPORT ON
EXPLORATION FOR SHELL LIMESTONE DEPOSIT
SAIPUM BLOCK
DISTRICT - KOLASIB, MIZORAM

EXECUTIVE SUMMARY



MINERAL EXPLORATION CORPORATION LIMITED
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EASTERN ZONE
RANCHI

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GEOLOGICAL REPORTS ON EXPLORATION FOR SHELL LIMESTONE DEPOSIT OF SAIPUM BLOCK DISTRICT: KOLASIB, MIZORAM

EXECUTIVE SUMMARY

1.0 LOCATION

Saipum block is located at Kauzen area of Saipum village, Kolasib district of Mizoram state and falls under Survey of India toposheet No. 83 D/15 (R.F. 1: 50,000), it lies between Latitudes (N): 24° 23' 10" to 24° 23' 26" Longitudes (E) : 92° 50' 11" to 92° 50' 19" It is located in the northern part of Mizoram state. Saipum village can be approached from capital city Aizwal by all weather roads from Aizwal via Serkhan – Hlimen Saipum road (135 kms.) The northeast railhead (75 kms) is Silchar of North Frontier Railway. The block is accessible only by jungle foot-track of about 8 kms. from Saipum village.

2.0 GEOLOGY AND STRUCTURE

The General geology is represented by a repetitive succession of neogene arenaceous and argillaceous sediments viz. sandstone, siltstone, mudstone and rare pockets of shell limestone which were later folded into a series of longitudinal plunging anticlines and synclines trending N-S to NNE-SSW approximately.

The rock types exposed in Saipum block belong to Upper Bhuban formation of Surma Group and composed moderately hard, compact and massive, bluish grey coloured sandstone, loose flaky shale with siltstone. The sandstone at places has calcareous material as matrix with broken pieces of shells embedded in it. It is located in the S-W of Saipum. The general thickness of limestone varies from 4.50 m. to 5.00 m. The general strike of the formations is NE-SW with dip amount of 18° - 23° towards NW.

The general structure of the area is characterized by refolding of compressed asymmetrical, major Tural syncline. The trend of the axes of these folds is NNE – SSW sympathetic to major fold axes of the region.

3.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & topographical survey covering 0.125 Sq.km. area, 500 Cu m of shallow trenching- and 40 m of deep Pitting. Geotechnical Studies/ Rock Mechanic Test on 15 number of Samples were carried out by MECL in the Block.

Systematic sampling was carried out from the pits and 15 nos. samples were sent to CMRI, Dhanbad for carrying out the rock mechanics studies of the shell limestones to study the feasibility of limestones for polishing slabs/tiles. And comparative studies of the results were carried out with ASTM standards. Following parameters were determined (1) Density (2) Uniaxial Compressive Strength (3) Uniaxial Tensile Strength (4) Water absorption in weight (5) Abrasion resistance/Cercher abrasivity index (6) Modulus rupture (7) Gloss (GU) & (8) Hardness (Schmidt hardness number).

Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

4.0 ORE RESERVE ESTIMATION

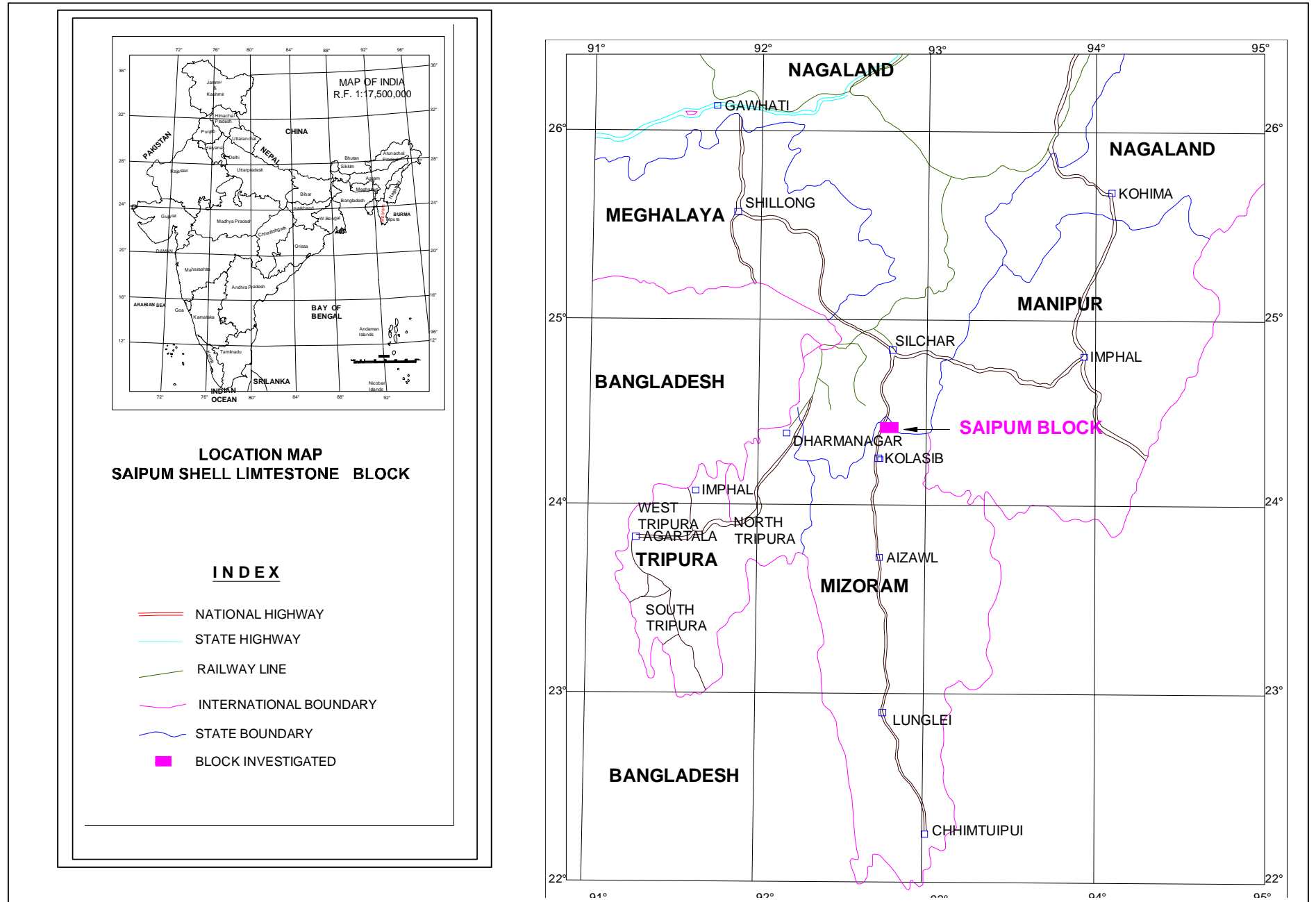
A total of 82875 Cu.mts of limestone (215475 tonnes) of gross reserves were assessed and 80554Cu. mts. of Lime Stone (209442 tonnes) of net reserves after considering the dip correction and depreciation factor, placed in all the three categories.

On studying the rock mechanic properties of shell limestone by CMRI, Dhanbad, that the parameters are in line with the ASTM standard and fulfills the requirement of polishing industries.

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

The Total Cost of Exploration is Rs. 95.07 Lakhs.

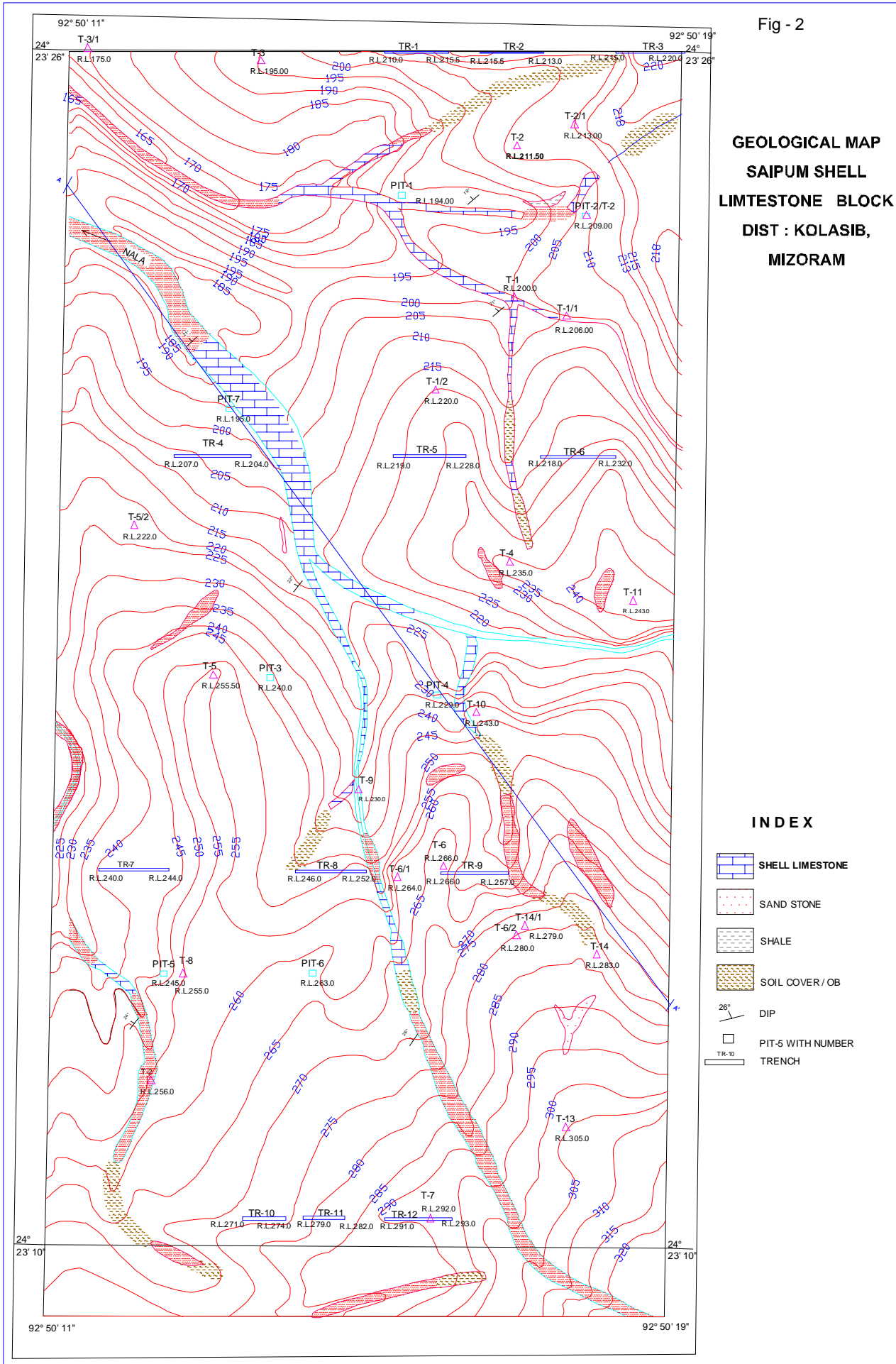
LOCATION MAP










GEOLOGICAL MAP

Fig - 2

**GEOLOGICAL MAP
SAIPUM SHELL
LIMESTONE BLOCK
DIST : KOLASIB,
MIZORAM**



INDEX

-  SHELL LIMESTONE
-  SAND STONE
-  SHALE
-  SOIL COVER / OB
-  26° DIP
-  PIT-5 WITH NUMBER
-  TRENCH

