

**Directorate General Mines & Minerals
NWFP**



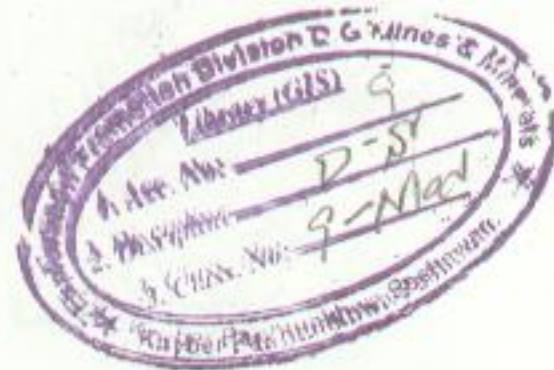
**DIMENSION STONE RESOURCES
AND OTHER MINERAL POTENTIAL OF
NWFP (PAKISTAN)**

M/16-4

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NWFP**

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Table.2. Resource Estimates of Serpentinities/Mafic Ultramafics in NWFP.

DIMENSION STONE RESOURCES AND OTHER MINERAL POTENTIAL OF NWFP

1. INTRODUCTION

- 1.1 NWFP has a diversity of dimension stone resources mainly marble & granite in addition to precious & semi precious gemstones, and metallic & non-metallic industrial minerals. The mineral endowments of the province can contribute significantly to the socio-economic uplift of the region with an enhanced contribution towards GDP of the country. The NWFP being part of northern Pakistan is dominated by the occurrence of mountainous terrains covering about 70% area in the north and plateau to plain topography in the south over an area of about 30% of the province, having a total area of 74,521 Km² in the northwest of the country. The FATA region having an area of 27220 Km² is endowed with similar nature of mineral resources.
- 1.2 In general, the northern part of NWFP being the mountainous region is dominated by the potential of marble/granite and other decorative stones etc. relating to construction industry. Other resources are nepheline syenite, phosphates, gemstones, metallic minerals including gold and base metals and variety of other industrial minerals. The southern NWFP has extensive potential of rock salt, gypsum, silica sand, iron ore, coal, limestone and clay minerals in addition to the potential of hydrocarbons. Apart from ordinary stones, sand, bajry etc, the mineral potentials of NWFP are categorized into five sub-divisions. These include gemstones (precious and semi precious), dimensional stones (marble, granite etc), industrial non-metallic minerals (soapstone, feldspar, nepheline syenite, rock phosphate & cement grade limestone and clay, etc) and metallic minerals including gold and base metals, scheelite (tungsten ore), chromite etc, and fuel minerals i.e coal, natural gas & oil.

- 1.3 Pursuance to implementation of National Mineral Policy, 1995, as institutional reforms, the Govt. of NWFP, created the Directorate General Mines & Minerals (DGMM), NWFP in August, 2001 by integrating the three mineral related agencies i.e Mineral Wing of DICMD, Mineral Wing of SDA and Inspectorate of Mines, with the aim to provide one window facilities to attract as well as facilitate national and overseas investment in the mineral sector of the province. The Exploration Promotion Division, DGMM continued its activities for the exploration and development of mineral resources of the province viz: gold and base metals in Chitral, Malakand and Hazara regions besides exploration of emeralds and other gemstones resources, marble, granite and other dimensional stones and the generation of geodata relating to mineral potential of NWFP.
- 1.4 The Licensing Division has so far granted more than 1200 mining concessions for different minerals in the private sector, where the revenue recovery to the Govt. exchequers is about Rs. 140 million per year. Investment-friendly regulatory and fiscal regimes are being introduced in the shape of modified mining concession rules to facilitate and promote the investment in mineral sector of NWFP.

2. **DIMENSION STONES**

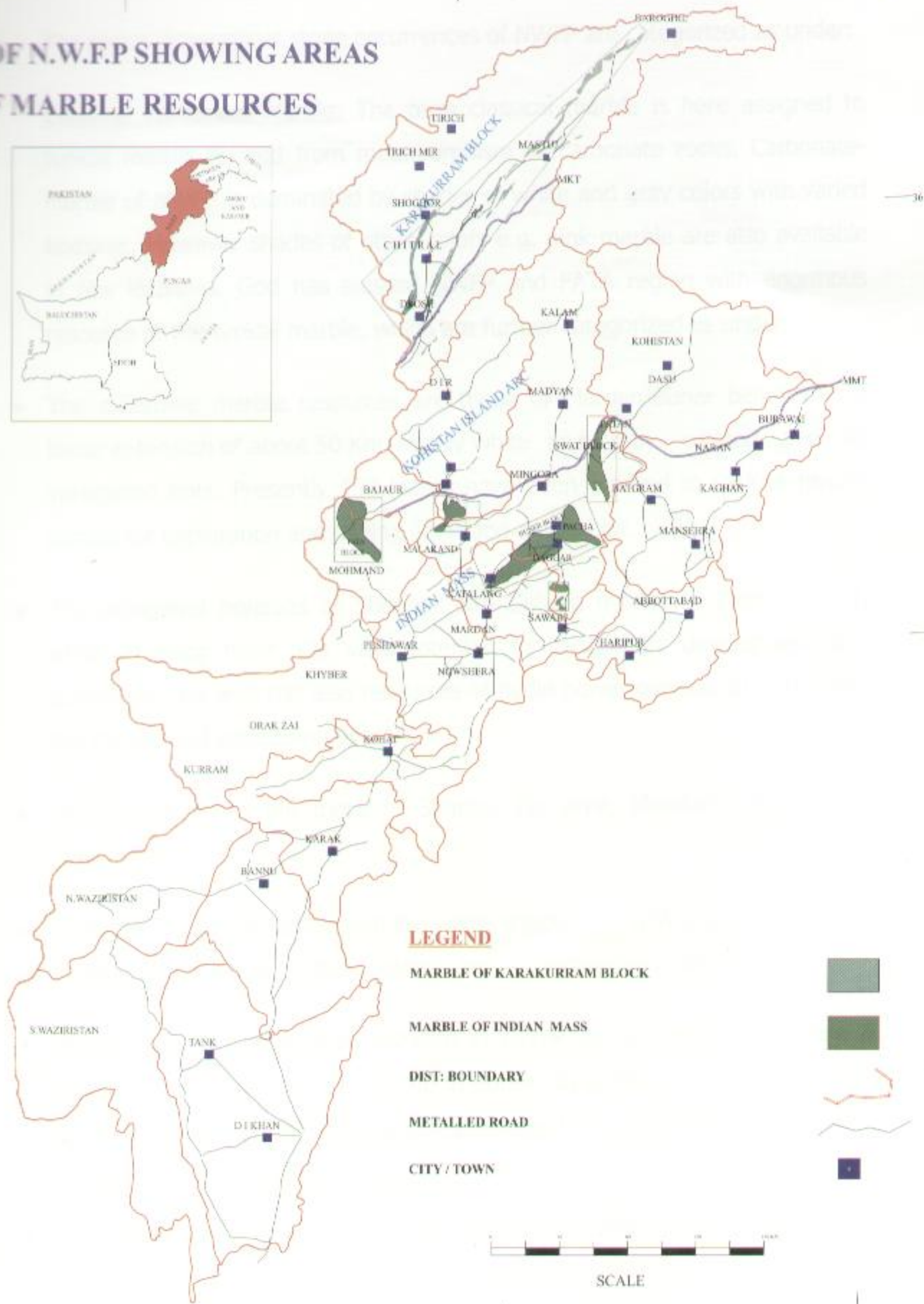
- 2.1 The dimension stones potential of NWFP, which include marble, granite, serpentine and other stones, are the vast potential of the province, warranting systematic developmental-activities through involvement of local and overseas investors.
- 2.2 The estimated mineable resource of marble in NWFP is about 4.0 billion tonne but so far limited systematic exploratory coverage has been extended. The potential marble bearing areas, having variety of classical carbonate-marble occurrences of different colours and shades, are being mined in prominent areas of Buner, Swat, Mohmand, Bajaur Agency, Mulagori and Chitral. At present about 80% of marble production in raw form is being marketed to Punjab and Sindh for its value addition in the shape of marble tiles, table tops and other decoratives. Although the private sector is involved in mining of marble in NWFP, but for getting immediate return, they resort to indiscriminate blasting for recovery of marble lumps rather than systematic marble blocks. To over come these bottle necks, the DGMM has launched a comprehensive exploratory programme to scan the marble bearing areas, which are amenable to block extraction and to reserve the same for systematic marble quarry development, with application of marble cutting machinery etc.
- 2.3 The Government of NWFP is planning to organize the marble and granite mining sector, NWFP by providing basic guidance to private sector for systematic exploration and quarry development of marble and granite resources to ensure block extraction. The purpose is to avoid wastage of marble through indiscriminate blasting and to ensure extraction of geometrical shapes & sizes of marble blocks by using modern marble cutting machinery. That would entail value addition to marble in the shape of marble/granite decoratives and the substantial enhancement of foreign

exchange revenue through exports. The private sector would be advised by the Exploration Promotion Division, DGMM for systematic development and mining, based on the information to be generated about the potential of marble and granite deposits/resources. The private sector would be invited to coordinate and cooperate with the DGMM for any assistance in planning and exploitation of the marble resources.

2.4 To provide basic guidance to the private parties, a pilot marble quarry has also been proposed for development at any suitable place at Buner with the application of modern cutting machinery, as a training institute to be executed jointly by the public/private sector. A systematic training programme would be launched for skill development of the workers and the staff of the private mining concerns.

2.5 In order to achieve the above targets, the Exploration Promotion Division, DGMM, NWFP, is implementing the ADP funded PC-II scheme "Geological Survey and Evaluation of Marble & Granite Resources of NWFP". The main objective of the scheme is to generate the necessary geological data for evaluation of Marble & Granite resources in NWFP and to establish a model geotechnical studies on selected prospects of marble and granite outcrops amenable to quarry development for extraction of geometrical blocks.

MAP OF N.W.F.P SHOWING AREAS OF MARBLE RESOURCES



LEGEND

MARBLE OF KARAKURRAM BLOCK

MARBLE OF INDIAN MASS

DIST: BOUNDARY

METALLED ROAD

CITY / TOWN



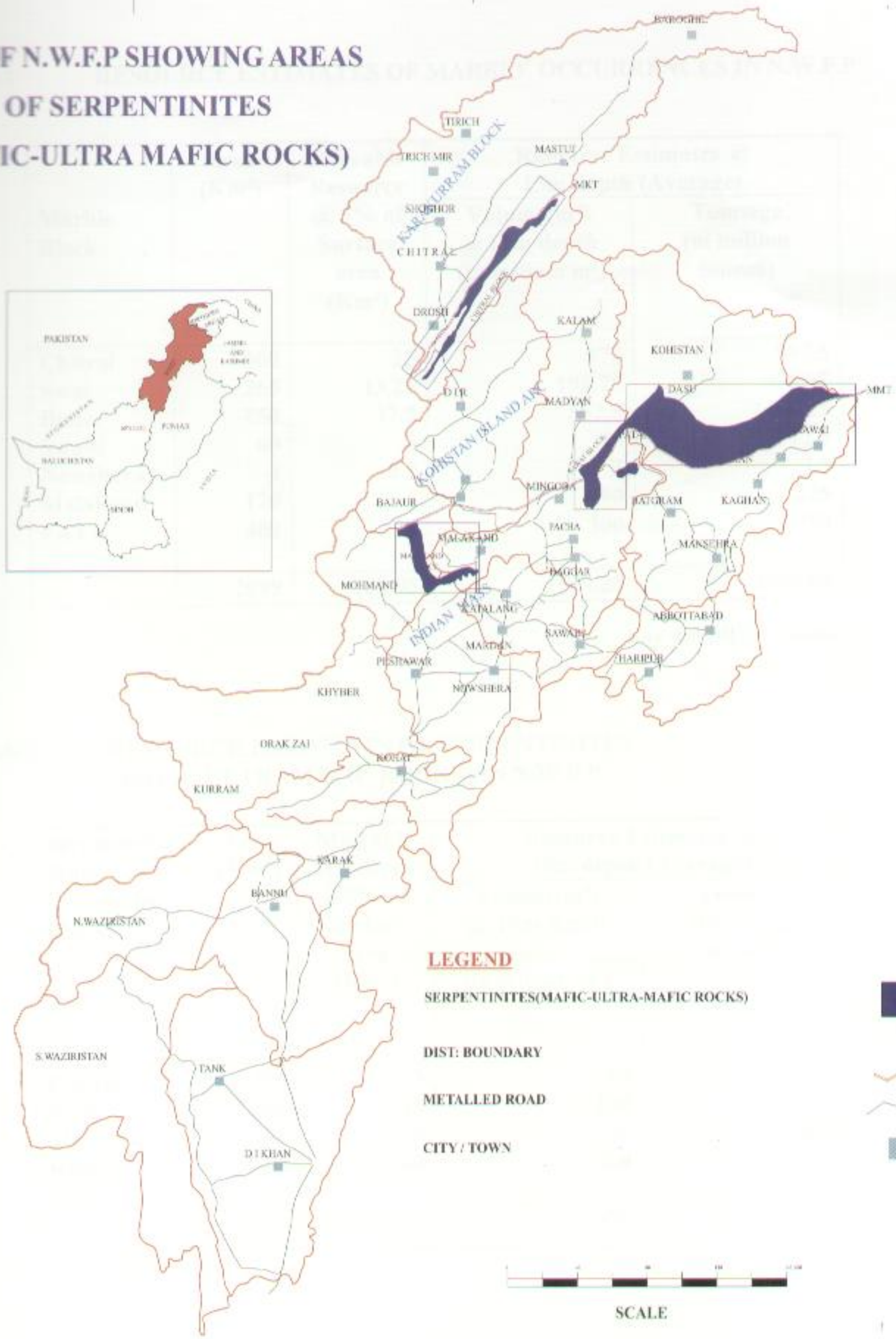
SCALE

Fig. 1

2.6 The major dimensional stone occurrences of NWFP are categorized as under:

- (i) Classical Carbonate Marble: The term classical marble is here assigned to typical marble formed from metamorphism of carbonate rocks. Carbonate-marble of NWFP is dominated by shades of white and gray colors with varied textures. However shades of other colors e.g. pink marble are also available in few localities. God has blessed NWFP and FATA region with enormous resource of the typical marble, which are further categorized as under:
- The extensive marble resources are those of Mardan-Buner belt within a linear extension of about 50 Km, mainly white and gray colored and its variegated tints. Presently 150 leases have been granted to various private parties for exploration and mining operation in this belt.
 - The elongated horizons of Shoghor and Gaherit marble in Chitral, mainly white in color have also vast potential for systematic development and quarrying. The area has also resources of hydle power generation to facilitate the mining and processing operation.
 - Other occurrences are those of Shangla Par area, Malakand Agency and Swabi area.
 - Outcrops of marble dominated by white shades in FATA area, e.g. Bajaur, Mohmand, Khyber and other localities are also extensive in occurrence.
 - About 220 units have been installed in NWFP for processing of marble & granite blocks. Out of these, 70 are in Buner, 30 in Mardan, 34 in Peshawar, 20 in Nowshera, 15 in Swabi, 6 in Mingora and the remaining are in Chitral, Hazara and other localities.
 - An approximate estimation of marble resource of NWFP and FATA area is given at table 1.

**MAP OF N.W.F.P SHOWING AREAS
OF SERPENTINITES
(MAFIC-ULTRA MAFIC ROCKS)**



LEGEND

- SERPENTINITES(MAFIC-ULTRA-MAFIC ROCKS)
- DIST: BOUNDARY
- METALLED ROAD
- CITY / TOWN



Fig. 2

Table-1 RESOURCE ESTIMATES OF MARBLE OCCURRENCES IN N.W.F.P

Marble Block	Area (Km ²)	Mineable Resource @ 5% of Surface area (Km ²)	Resource Estimates @ 15m depth (Average)	
			Volume(m ³) @ 15m depth (in million m ³)	Tonnage (in million tonnes)
Chitral	500	25	375	937.5
Swat	265	13.25	198.75	496.87
Buner	750	37.5	562.5	1406.25
Swabi	60	3	45	112.5
Nowshera	4	0.2	3	7.5
Malakand	120	6	90	225
FATA	400	20	300	750
	2099	104.95	1574.25	3935.62

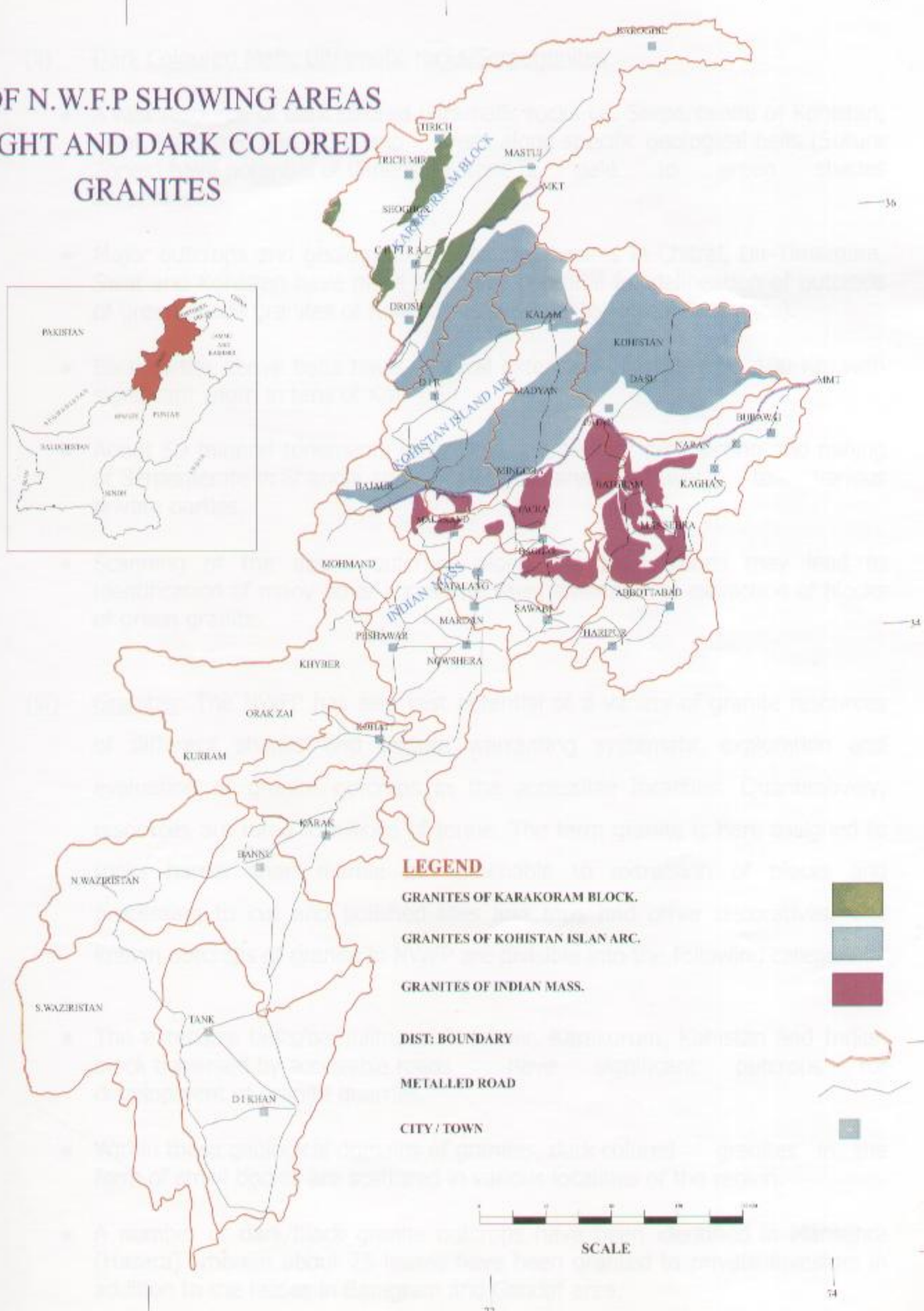
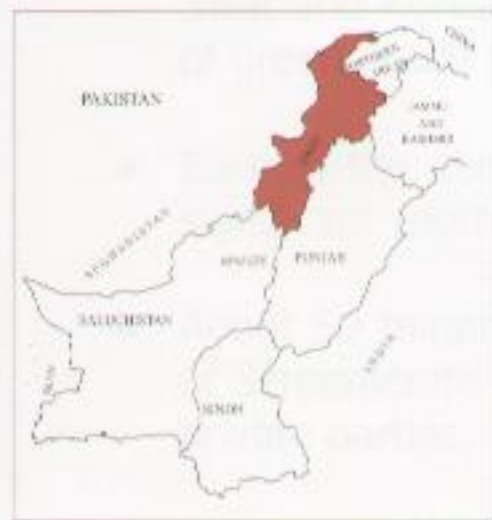
Say 4.0 billion tonne

Table-2 RESOURCE ESTIMATES OF SERPENTINITES (MAFIC ULTRAMAFIC ROCKS) IN N.W.F.P

Serpentenite/ Mafic Ultramafic Block	Area (Km ²)	Mineable Resource @2% of Surface area (Km ²)	Resource Estimates @ 10m depth (Average)	
			Volume(m ³) @ 10m depth (in million m ³)	Tonnage (in million tonnes)
Chitral	450	9	90	270
Swat	500	10	100	300
Malakand	400	8	80	240
Hazara	2000	40	400	1200
	3350	67	670	2010

Say 2 billion tonne

MAP OF N.W.F.P SHOWING AREAS OF LIGHT AND DARK COLORED GRANITES



LEGEND

- GRANITES OF KARAKORAM BLOCK.
- GRANITES OF KOHISTAN ISLAN ARC.
- GRANITES OF INDIAN MASS.
- DIST: BOUNDARY
- METALLED ROAD
- CITY / TOWN



Fig. 3

(ii) Dark Coloured Mafic Ultramafic rocks/Serpentinites

- A vast resource of dark colored ultramafic rocks i.e. Serpentine of Kohistan, Swat, Malakand and Mohmand areas along specific geological belts (Suture Zones) have potential of dimension stone of pale to green shades Serpentine.
- Major outcrops and geological belts of metabasites in Chitral, Dir-Timergara, Swat and Kohistan have more extensive potential for delineation of outcrops of green shade granites of Kohistan Island Arc(Geological Sequence).
- Each of the above belts have a lateral extension of more than 100 Km with significant width in tens of Km.
- About 50 mineral tenements have been granted for prospecting and mining of Serpentine in Shangla and Malamjaba areas (Swat) to various private parties.
- Scanning of the above outcrops along the trunk roads may lead to identification of many other accessible sites, amenable to extraction of blocks of green granite.

(iii) Granites: The NWFP has also vast potential of a variety of granite resources of different shades and texture warranting systematic exploration and evaluation of granite outcrops in the accessible localities. Quantitatively, resources are rated in billions of tonne. The term granite is here assigned to rocks harder than marble but amenable to extraction of blocks and processing to cut and polished tiles and tops and other decoratives. The known outcrops of granite in NWFP are divisible into the following categories.

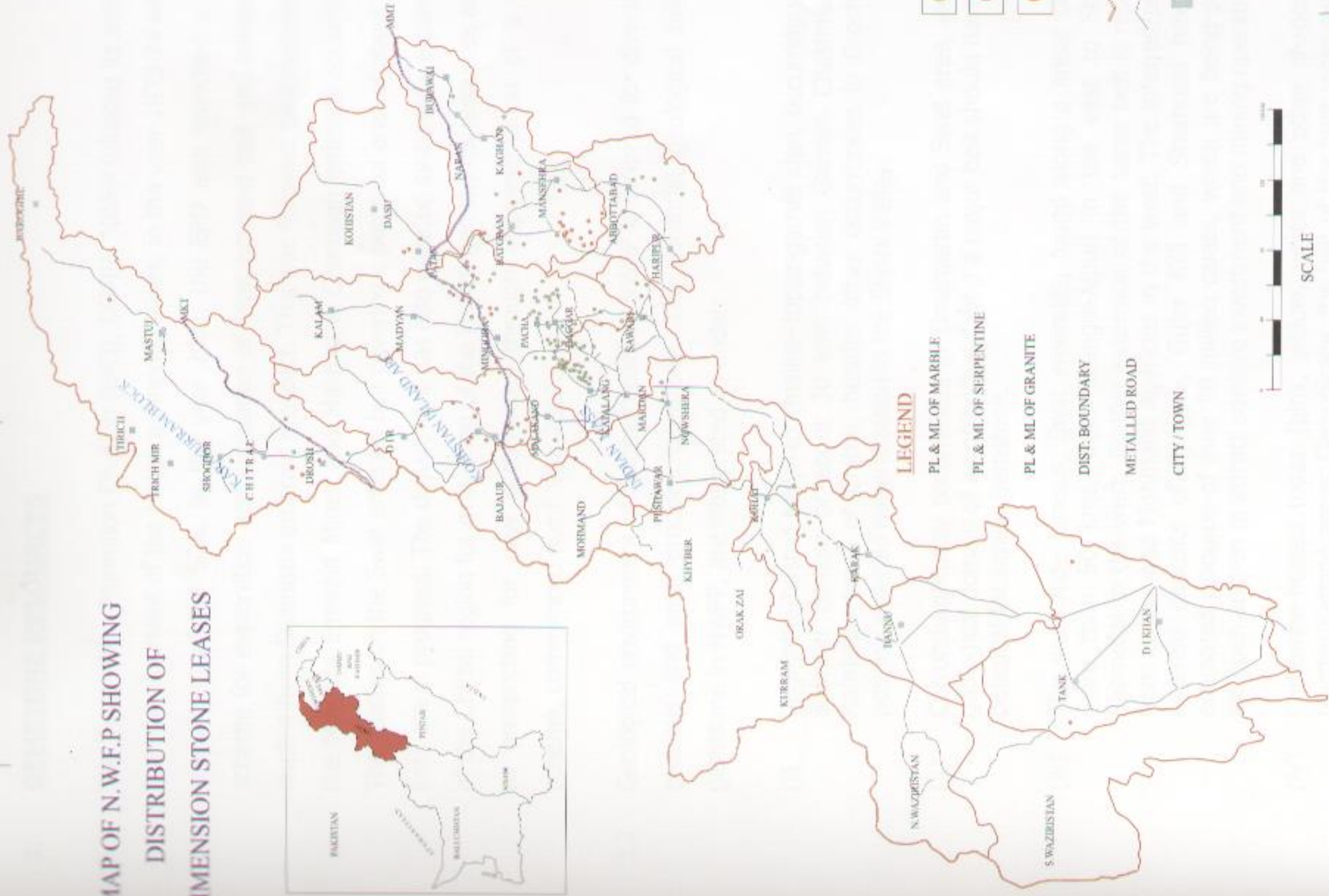
- The extensive belts/batholiths of Tirichmir, Karakorum, Kohistan and Indian block traversed by accessible roads have significant outcrops for development of granite quarries.
- Within these geological domains of granites, dark colored granites in the form of small bodies are scattered in various localities of the region.
- A number of dark/black granite outcrops have been identified in Mansehra (Hazara) wherein about 25 leases have been granted to private investors in addition to the leases in Batagram and Gandaf area.

- Prospects of a variety of shades and textures of granites are not uncommon warranting systematic scanning and road logging for delineation of suitable outcrops.
- The granite resources of NWFP are rated in tens of billion tonnes and the accessible outcrops along the road are estimated to the tune of 3 billion tonne.

(iv) Ordinary Stone Decoratives:

- This category of dimension stone is referred to rocks other than granite and marble but amenable to block extraction and cutting/polishing for use as substitute of marble/granite. These also include the weakly metamorphosed/partially marbalized limestone in various localities mainly in association with classical marble.
- These includes both soft and hard rocks e.g. slates, gneisses, quartzite etc for use in the construction industry i.e wall facing, floor tile and as insulator bricks (slate bricks/slabs)
- Extensive outcrops of this category of decorative stones are scattered throughout NWFP having significant resources for systematic development and ultimate quarrying of slabs and blocks for further processing and strengthening of construction industry in the province.
- The resources are estimated in billions of tonnes and the accessible outcrops along road sites are rated to about One billion tonne.

MAP OF N.W.F.P SHOWING DISTRIBUTION OF DIMENSION STONE LEASES



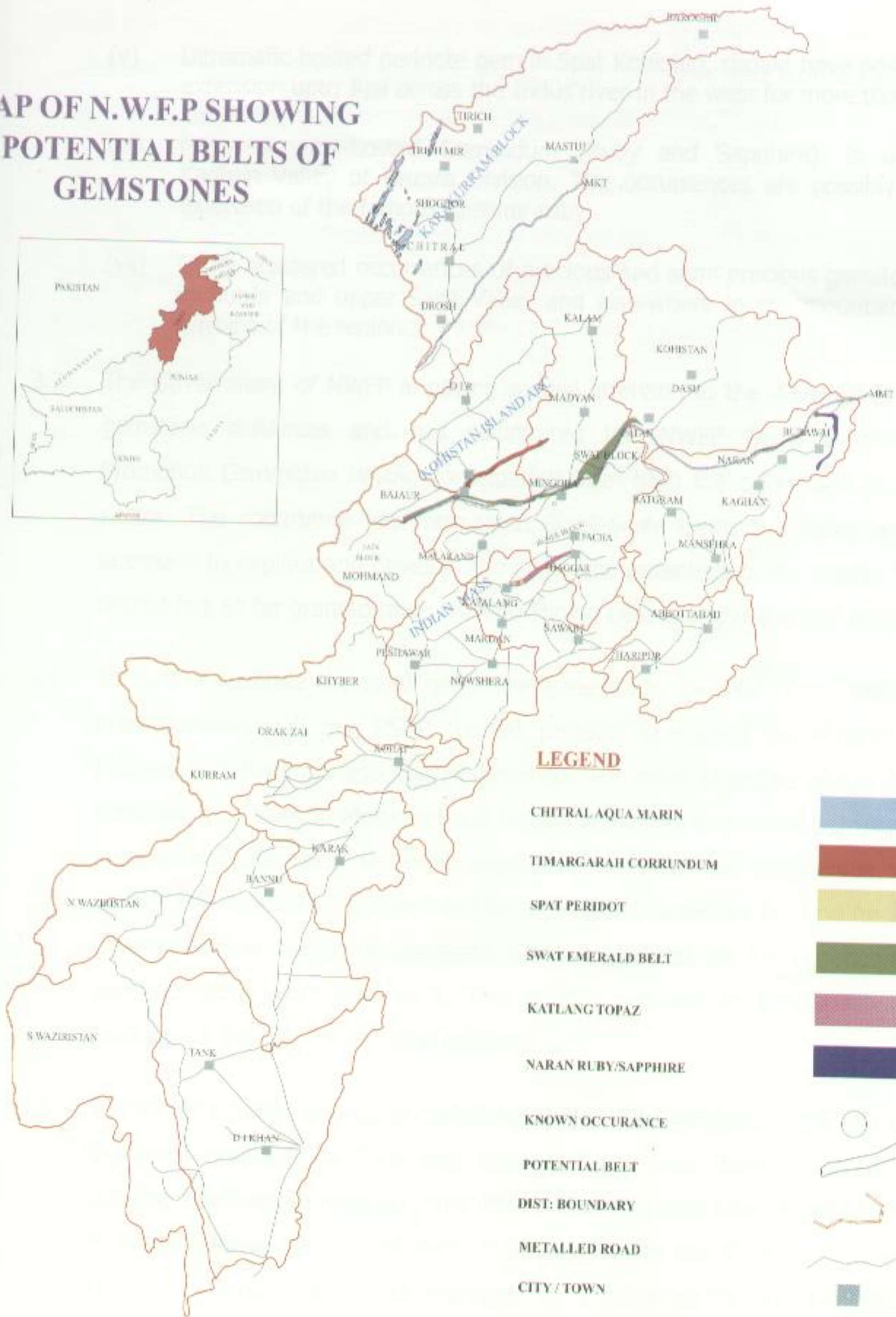
LEGEND

- PL & ML OF MARBLE
- PL & ML OF SERPENTINE
- PL & ML OF GRANITE
- DIST. BOUNDARY
- METALLED ROAD
- CITY / TOWN



SCALE

MAP OF N.W.F.P SHOWING POTENTIAL BELTS OF GEMSTONES



LEGEND

- CHITRAL AQUA MARIN
- TIMARGARAH CORRUNDUM
- SPAT PERIDOT
- SWAT EMERALD BELT
- KATLANG TOPAZ
- NARAN RUBY/SAPPHIRE
- KNOWN OCCURANCE
- POTENTIAL BELT
- DIST: BOUNDARY
- METALLED ROAD
- CITY/TOWN

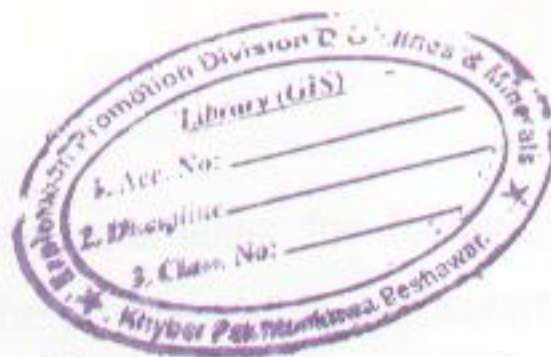


SCALE

Fig. 5

areas are being explored and developed by investment of local communities under small gemstone lease-holds to regularize illicit mining and marketing. This is also an approach towards exploration & identification of new discoveries of gemstones.

- 3.6 The Directorate General Mines & Minerals is also implementing a PC-I scheme at its Mineral Testing Laboratory to establish a Gems Testing Section and to facilitate exploration, mining, value addition and trading the gemstones in the private sector.
- 3.7 Peshawar is the Hub of gem trading, mostly undertaking the business/marketing activities through smuggled raw gems from neighbouring country and local gem products. Small scale cottage units, have been established in the main city area of Qisa Khawani & Nimak Mandi, Peshawar. To regularize the gem trade, the Govt. has established the Gem & Gemological Institute of Pakistan (GGIP) at Peshawar, which would ultimately be converted into a training/value addition institute besides the establishment of trade center. Hopefully with these actions, the present level of export of gems worth about US\$ 12 million would be enhanced to about US\$ 100 million in a short span.



4. METALLIC MINERALS

- 4.1 Northern part of NWFP is conceptually considered to be prospective for a diversity of metallic minerals potential including gold and other precious metals. The Exploration Promotion Division, DGMM has worked on various localized mineral occurrences viz: Malakand and Kohistan Chromite; Besham Lead-Zinc; Copper in Drosh and Dir; Tungston, Antimony, Iron, low tonnage-high grade gold in Chitral and other exploration targets of gold and base metals identified in Chitral, Malakand and Hazara regions. The Waziristan metallogenic belts of FATA area are in addition to these occurrences warranting systematic exploration. Presently, the EPD is implementing a PSDP funded PC-I scheme of Pilot/Bench Scale Studies on Processing of Ores for extraction of metals. The studies under the scheme will also be helpful for assessment and exploitation of the small-scale occurrences of metallic minerals, including gold-silver identified in NWFP.
- 4.2 The Government of NWFP with technical assistance of Australia, initiated a systematic exploration coverage, mainly through drainage geochemical survey under the Gold Exploration & Mineral Analysis Project (GEMAP) of Aus Aid in Chitral in the year 1992. Under the programme the Pakistani Geo-Scientists including Exploration Geologists were acquainted with necessary training in the gold fields of Australia as well as on-site training in northern Pakistan i.e Chitral & Gilgit regions.
- 4.3 Keeping in view the effectiveness of the GEMAP exploration, the Malakand and Hazara regions of the province were also subjected to the systematic exploration coverage as per pattern designed under the GEMAP. As such the Government of NWFP has now completed a first pass exploration coverage of northern part of NWFP over an area of 40,000 sq.kms, which resulted into generation of expanded database for follow-up exploration of selected targets of gold and related metallic minerals of the region. The data is interpreted

into 34 targets areas of gold and base metals anomalies for follow-up exploration and as investment opportunities for the private sector, particularly overseas exploration & mining companies.

4.4 From north towards south, the selected target areas of gold and base metal anomalies in NWFP, based on geological domains are further categorized, as under:

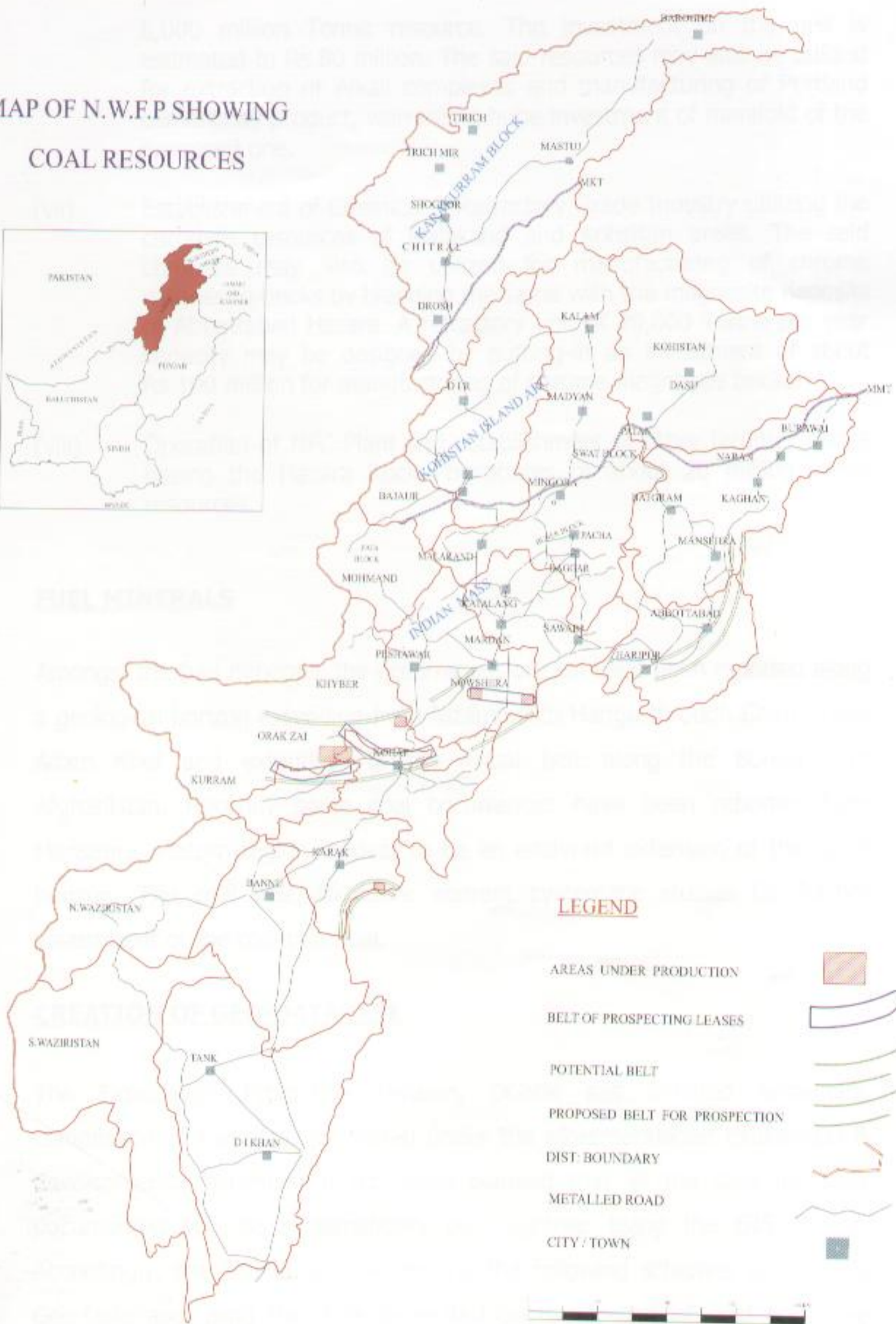
- (i) Six targets over an accumulated area of 1000 Km² for follow-up exploration of gold, tungston, lead, zinc and nickel along the Pamir Block in Chitral.
- (ii) Five target areas of gold, copper, lead, zinc & silver as well as gold-platinum suit along the Karakorum Block, over an accumulated area of 800 Km² in Chitral.
- (iii) Fourteen target areas over an accumulated area of 3000 Km² in Darosh-Chitral, Dir, Timergara and Kohistan area, along the geological belt of Kohistan Island Arc sequence of northern part of NWFP.
- (iv) Nine selected targets of gold, lead, zinc and other base metals over an accumulated area of 1300 Km² along the geological domains of Indian Mass in Swat and lower Hazara.

4.5 The EPD is in a process of systematic documentation of the data, generated through systematic exploration-coverage of northern part of NWFP for gold and base metals prospects. The same would be disseminated amongst the investors to attract and facilitate them for follow-up exploration of the selected targets. In order to demonstrate follow-up exploration to a logical end, the 300 Km² top priority target of Mirkhani Copper-Gold anomalies were followed-up to the stage of prospect identification and to reach the source of gold mineralization. The EPD has accordingly identified the porphyry style copper-gold mineralization in 75 Km² area in Chitral. The gold values in volcanic breccia- hosted mineralization, as one of the four prospects emerged, range upto 80 g/t in the said target of gold and base metal anomalies.

5. INDUSTRIAL NON METALLIC MINERALS

- 5.1 These scattered potential in NWFP viz fertilize grade phosphate in Hazara, glass and ceramic grade nepheline syenite in Buner, Cement grade limestone and clay in Banda Chashma, Pezu, Lachi, Nizampur and Mardan area, glass grade silica sand in Munda Kucha and in southern area of NWFP, Langrial iron ore, Shirwan soapstone and other industrial minerals in NWFP.
- 5.2 A list of major industries proposed on mineral identified for investment in NWFP, is reproduced as under:
- (i) Portland Cement Plant of 3000 Tonne per day capacity involving an investment of Rs.5 billion, one each on limestone and clay deposits in Banda Chashma-D.I.Khan; Lachi-Kohat, Nizampur-Nowshera and Mardan-Katlang. The deposits are in the range of 600, 200, 600 & 200 million Tonne, respectively.
 - (ii) Gypsum Plaster & Plaster board industries/plaster of paris of 60,000 tonne per year capacity on about 150 million tonne of high grade gypsum in Kohat-Karak ranges. The investment on the industries is estimated to the tune of Rs.2 billion.
 - (iii) Soda Ash Castic Soda Plant of 50,000 tonne per year capacity on about 100 million tonne rock salt deposits in Kohat-Karak region, involving an estimated investment of Rs.800 million.
 - (iv) Marble Granite Tiles & Decorative Processing Plants basing the marble and granite resources in Buner, Mardan, Chitral, Hazara and Kohistan regions. At least 10 units of 200,000 tonne per year capacity each involving about Rs.50 million investments, may be proposed.
 - (v) Sheet Glass Manufacturing Industry/units of 20,000 Tonne per year capacity basing the silica sand deposits of Pezu D.I.Khan and Munda Kuccha, Mansehra. The investment on the said industrial unit is estimated to the tune of Rs.300 million.
 - (vi) Glass & Ceramic Industry basing the vast potential of Nepheline Synite in Buner area. A 30,000 Tonne per year capacity plant may be proposed on the Nepheline Synite, estimated to the tune of

MAP OF N.W.F.P SHOWING COAL RESOURCES



LEGEND




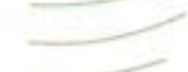



- AREAS UNDER PRODUCTION 
- BELT OF PROSPECTING LEASES 
- POTENTIAL BELT 
- PROPOSED BELT FOR PROSPECTION 
- DIST. BOUNDARY 
- METALLED ROAD 
- CITY / TOWN 



Fig. 6

6,000 million Tonne resource. The investment on the unit is estimated to Rs.80 million. The said resources may also be utilized for extraction of Alkali complexes and manufacturing of Portland cement, by-product, warranting huge investment of manifold of the proposed one.

- (vii) Establishment of Chemical & Refractory Grade Industry utilizing the chromite resources of Malakand and Kohsitan areas. The said chromite may also be utilized for manufacturing of chrome magnesite bricks by blending the same with the magnesite deposits of Abbottabad Hazara. A refractory unit of 20,000 Tonne per year capacity may be designed by putting-in an investment of about Rs.100 million for manufacturing of chrome magnesite bricks.
- (viii) Operation of NFC Plant and establishment of other fertilizer plants basing the Hazara Rock Phosphates of about 20 million tonne resources.

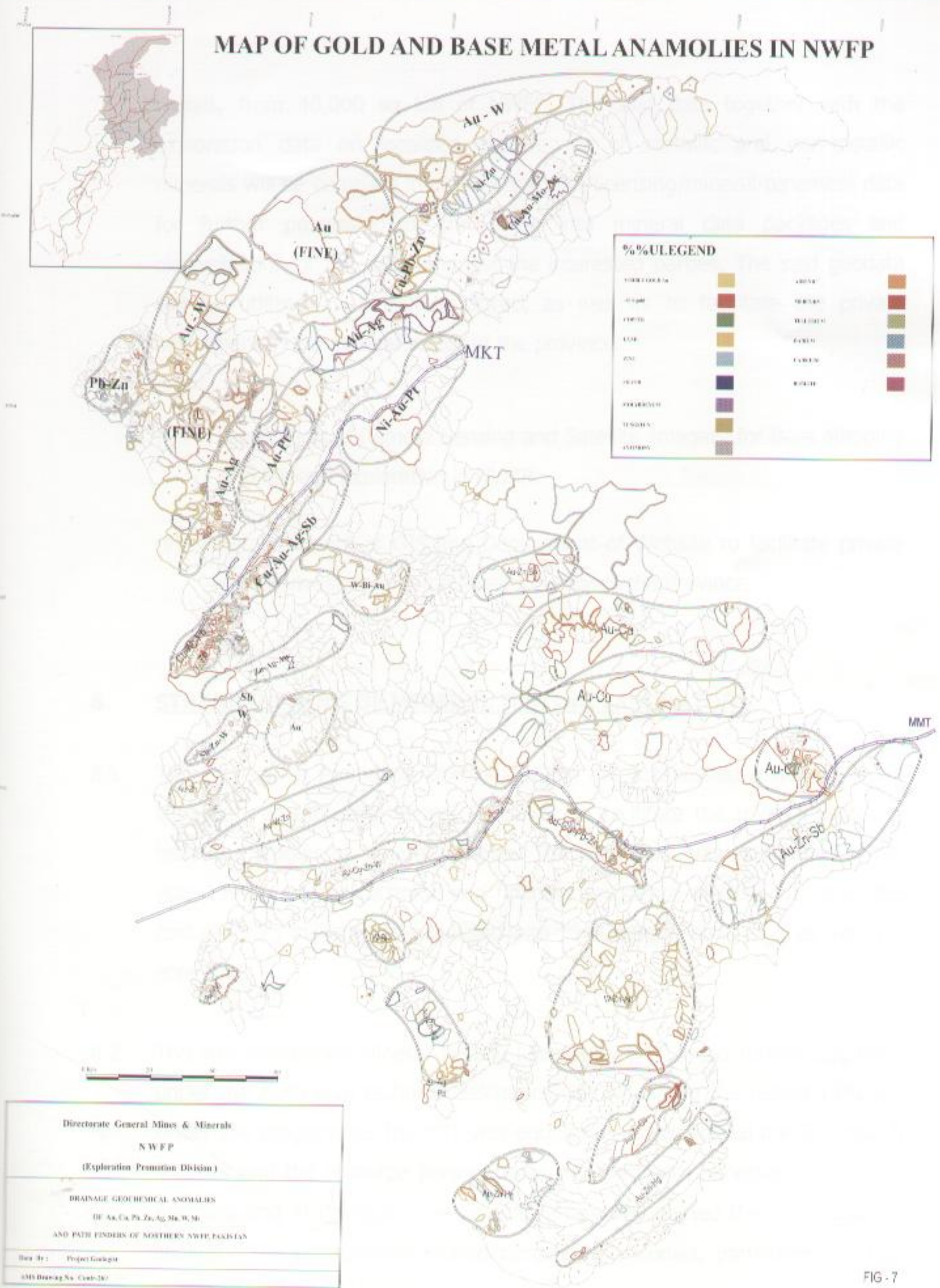
6. **FUEL MINERALS**

Amongst the fuel minerals, the occurrences of coal have been reported along a geological horizon extending from Nizampur to Hangu through Chirat, Dara Adam Khel and extending to the Tribal belt along the Border with Afghanistan. Recently some coal occurrences have been reported from Mansehra, Hazara region, appear to be an eastward extension of the same horizon. The coal belt, therefore warrant systematic studies for further assessment of the coal potential.

7. **CREATION OF GEO-DATABASE**

- 7.1 The Exploration Promotion Division, DGMM has initiated systematic compilation of the data, generated under the aforementioned exploration & developmental activities. It has been planned that all the data manually documented will be systematically put together using the GIS format. Accordingly, the DGMM is implementing the following schemes to create a Geo-Database using the data generated on exploration of gold and base

MAP OF GOLD AND BASE METAL ANOMOLIES IN NWFP



%%ULEGEND

IRON OXIDE	[Yellow]	IRON	[Orange]
COBALT	[Red]	TRIOXIDE	[Dark Red]
PERITE	[Green]	TRIOXIDE	[Olive Green]
COB	[Yellow-Orange]	COBALT	[Blue-Gray]
COB	[Light Blue]	CARBON	[Dark Red]
COB	[Dark Blue]	COBALT	[Red]
PERITE	[Purple]		
TRIOXIDE	[Brown]		
TRIOXIDE	[Dark Brown]		

Directorate General Mines & Minerals
 NWFP
 (Exploration Promotion Division)

DRAINAGE GEOCHEMICAL ANOMALIES
 OF Au, Cu, Pb, Zn, Ag, Mo, W, Bi
 AND PATH FINDERS OF NORTHERN NWFP, PAKISTAN

Scale: Project Geologist
 GMS Drawing No: Geol-207

FIG-7

metals, from 40,000 sq km of NWFP. The said data together with the exploration data on localized occurrences of metallic and non-metallic minerals will be compiled in conjunction with licensing/mineral-tenement data for further processing of the same into mineral data packages and dissemination of the data amongst the interested parties. The said geodata will be utilized as a tool to attract as well as to facilitate the private investment in the mineral sector of the province.

- (i) Application of Remote Sensing and Satellite Imagery for Base Mapping and Mineral Exploration in NWFP.
- (ii) Establishment of GIS and Deployment of Website to facilitate private sector investment in the Mineral Sector of the Province.

8. STRENGTHENING OF MINERAL TESTING LABORATORY

- 8.1 The Exploration Promotion Division, DGMM has established a well-equipped laboratory at Industrial Estate, Peshawar to facilitate the mineral sector in tests and studies of mineral samples. The laboratory was established in the year 1990, with the technical and financial assistance of ODA, UK at a total cost of Rs.23 million, has a building with 10,000 Sq.ft. covered area over 1.5 acre land.
- 8.2 The aforementioned Mineral Testing Laboratory (MTL) was further upgraded under the Australian technical assistance/GEMAP during the period 1992-95. Under the programme, the MTL was equipped with additional mineral testing facilities and the resource persons were provided with necessary training in Australia and in Pakistan. The laboratory has also gained the capabilities of analyzing the environment-related samples and studies, particularly relating to mining and mineral processing industry.

- 8.3 The Pakistan National Accreditation Council (PNAC) Ministry of Petroleum & Natural Resources, Govt. of Pakistan, has selected the MTL for accreditation under ISO 17025 Certificate. The MTL is in a process of necessary documentation for the purpose in consultation with a foreign expert sponsored by UNIDO. The MTL has prepared the Laboratory Quality Manual and is pursuing the completion of the formalities required for the assessment by the committee nominated by PNAC.
- 8.4 The DGMM is also planning to further upgrade the laboratory facilities to convert the same from ore-grade to exploration-grade laboratory to facilitate the future foreign investment in analyzing the exploration samples from selected mineral prospects of gold and base metals and gemstones in northern NWFP.

9. Regulatory & Fiscal Regime/Policy Frame Work

- 9.1 Presently the NWFP Directorate General Mines & Minerals(DGMM) is exercising the NWFP Mining Concession Rules, 1976, whereas the District Administrations are exercising control for the grant of minor minerals in the private sector.
- 9.2 Under the 1971 Rules, the mining leases of minor minerals i.e sand, bajri, gravel etc along the river beds are auctioned for one year, alongwith the royalty.
- 9.3 Under the Mining Concession Rules, 1976, all solid minerals, except radioactive minerals and oil & gas are granted by the DGMM, being the Licensing Authority.
- 9.4 The mineral tenements under the NWFP Mining Concession Rules, 1976 are granted by issuing:

- i) Prospecting Licence (PL) over a maximum area of 3200 acre (7.5 Sq. Km.) initially for one year, extendable to a maximum of five year, on yearly basis.
- ii) Conversion of PL into Mining Lease (ML), depending upon the development and performance of the party. A ML is granted for a period to a maximum of 30 years, depending upon the investment and size of the operation.
- iii) A ML is also granted through open auction of ree/surrendered or cancelled mining lease, having proven deposits.

iv) A sitting lessee can also transfer/assign his granted area as a whole or in partial through mutual understanding and completion of the required codal formalities of the Department.

9.5 The DGMM has initiated implementation of NMP, 1995 and has also formulated NWFP Mining Concession Rules, 2004 in line with the said Policy. The Rules are under process for approval of the NWFP Government. The salient features of the policy are given as under.

- i) Institutional reforms in the form of one window facility/one-stop shop arrangements and creation of NWFP Directorate General Mines & Minerals.
- ii) Constitution of Mineral Investment Facilitation Authority(MIFA).
- iii) The DGMM has taken lead in initiating creation of a systematic Geo-Database to attract as well as facilitate investment in the mineral sector as envisaged in the NMP, 1995.
- iv) Conducive and uniform regulatory regime (MCR, 2004), addressing the following parameters:

- Reconnaissance Licence : Covering 100 to 10000 Km²
 - Duration : One year
 - Fee : Rs. 15,000
- Exploration License : Not exceeding 1000 Km²
 - Duration : 3 Year
 - Fee : Rs. 25,000
 - Renewal Fee : Rs. 50,000(1st & 2nd renewal)

- Mineral Deposit Retention Licence : Not exceeding Exploration Licence area.
Duration : 2 Years
Fee : Rs. 100,000
Renewal Fee : Rs. 100,000

- Mining Lease : Maximum area 250 Km²
Duration : Upto 30 years
Fee : Rs. 100,000
Renewal Fee : Rs. 100,000

9.6 Fiscal Regime

i) Royalty structure – royalty to be charged at ad-valorem rates.

- Precious stones : 10% of the gross sale value.
- Precious metals : 3%
- Base metals & semi precious stones. : 2%
- Others : 1%

(Royalty to be charged by the Provincial Govt: as solid minerals have been declared as provincial subject).

ii) Federal Taxes

Income Tax.

- Rate of Corporate Tax : 30% for public companies listed on stock exchange and 35% for non-resident companies.
- Minimum Corporate Tax : 0.5% of the declared turn-over, annually.

Development expenditure deduction.

- Expenditure incurred on exploration qualify for deduction in the determination of taxable income.

- Deduction of income tax on expenditure incurred for project development operations. : 25% per annum
- Depletion allowance : Nil
- With-holding tax levied on dividends. : 7.5% of dividend From mining profit to non-resident share holders.
- With-holding tax on non-resident, Contractors in mining operations. : 6% of gross payment made.
- Sales tax : No sale tax will be levied.
- Zakat : Non-Muslim and non-Resident share Holders are exempted from payment of Zakat.
- Interest : Exempted from with-holding tax.

iii) Concessions on Imports

- During exploration, custom duty @ 5% and no sales tax would be charged on import of machinery, equipment and spare parts.
- Machinery, equipment and spares imported by a company for use in mining operations will be subjected to custom duty @ 10% of the import value.

iv) Concession on Exports

- 25% Freight Subsidy on marble & granite and other bulky minerals on last destination (export).

v) Declaration of Export Processing Zones

In order to Promote Private national and overseas investment in the mineral sector of the Province, the Government of NWFP in collaboration with Export Processing Zones Authority (EPZA) and related public and private stake holders, is planning for declaration and establishment of EPZs in

mineral bearing areas of the region. This will facilitate the investors in duty free import of exploration, mining and processing machinery and other benefits reproduced as under:

Incentives

- 100% Ownership rights.
- 10% Repatriation of Capital & Profits.
- No minimum or maximum limit for investment.
- Duty free imports of machinery, equipment & material.
- No sales tax on input goods including electricity & gas bills.
- Obsolete/old machinery can be sold in domestic market of Pakistan after payment of applicable duties & taxes.
- No excise duty, no custom duty on cement, steel & any other mineral used in construction of the buildings.
- Freedom from National Import restrictions.
- Foreign Exchange control regulation of Pakistan not applicable.
- Defective goods/waste can be sold in domestic market after payment of applicable duties, maximum upto 3% of total value of export.
- Duty free vehicle allowed under certain conditions. After 5 years of use, vehicles can be disposed off in domestic market on payment of duty on depreciated value.
- Domestic market of Pakistan available on same condition as for imports from other countries.
- Units operating in EPZs can undertake sub-contracting for units of tariff area subject to payment of duty and taxes on value addition only.
- Only EPZA authorized to collect Presumptive tax at the time of export of goods, which would be final tax liability.
- EPZ units allowed supplying goods to Custom manufacturing bonds.
- Production oriented labour laws to be solely regulated by the Authority.

- EPZ manufacturer will be treated at par with bonded manufacturers in tariff area for any future incentives to be announced for exporters.
- Relief from double taxation subject to be bilateral agreement.

Facilities

- One window service and simplified procedure.
- All infrastructure facilities like water, electricity, gas, telex, fax and telecommunication system are made available by EPZA.
- Skilled & un-skilled labour available in abundance.
- Sub-contracting without limit on variety and quantity is allowed outside the zone as well as within the zone.
- The garment manufacturing units, located in Export Processing Zones are eligible to participate in auction of quotas.
- Generalised System of Preference (GSP) concessions given by various countries to imports from Pakistan are available to the manufacturers in the zone.
- Peaceful, secure and environmentally protected pollution free work area.
- Inter-unit transfer of finished goods among exporting units allowed.

The Directorate General Mines & Minerals, Govt. of NWFP, in collaboration with EPZA is organizing a seminar by involving the related public & private stakeholders. In the proposed seminar, the participants will discuss the amenability of the concept of EPZs to exploration, development and mining of mineral resources of NWFP and basing it for manufacturing-industry.

**MODIFICATION/AMENDMENT IN RULES OF BUSINESS 1985,
DIRECTORATE GENERAL MINES & MINERALS, NWFP**

Management of Mineral Resources of NWFP in terms of:

- 1). **Regulation and Management of Mineral Title System**
 - i). Formulation and implementation of mineral regulatory regime concerning Mining Concession Rules/Licensing and collection of royalty and other revenue on minerals.
 - ii). Implementation of Mines Safety & Labour Welfare Mines Act: 1923, Coal & Metalliferous Regulation, 1926, and other by-laws framed there under for collection of excise duty etc.
 - iii). Coordinate land excess to mineral tenements for exploration, development and mining by the concessionaires.

- 2). **Generation and Management of Mineral Data/
Establishment of Geodata Base/GIS**
 - i). Geological surveys and mineral exploration for mineral data generation, including resource mapping/remote sensing and mineral tenement evaluation.
 - ii). Information services through management of data/mineral based Geodatabase.

- 3). **Promotion & Facilitation**
 - i). Promote exploration, development and mining of mineral resources of the province.
 - a). Dissemination of mineral data to attract and facilitate interested parties/investors (National/International/Multi-National).
 - b). Technical and consultancy services and small mines assistance for exploration, development, mining & environmental management. Provide competent interface with international investors.
 - ii). Provide mineral testing facilities to the mining industry, including testing of environmental samples. Conducting R&D studies on minerals.
 - iii). Implementation of mineral developmental works/projects.