The Republic of the Union of Myanmar

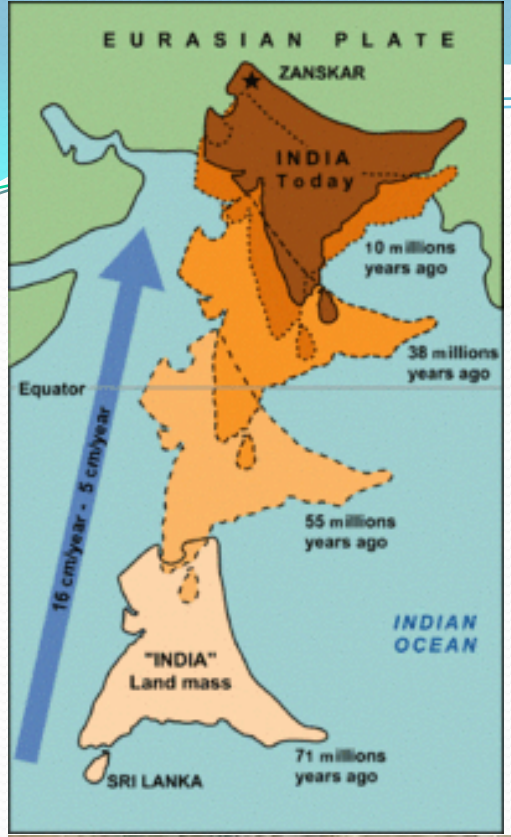
Ministry of Mines

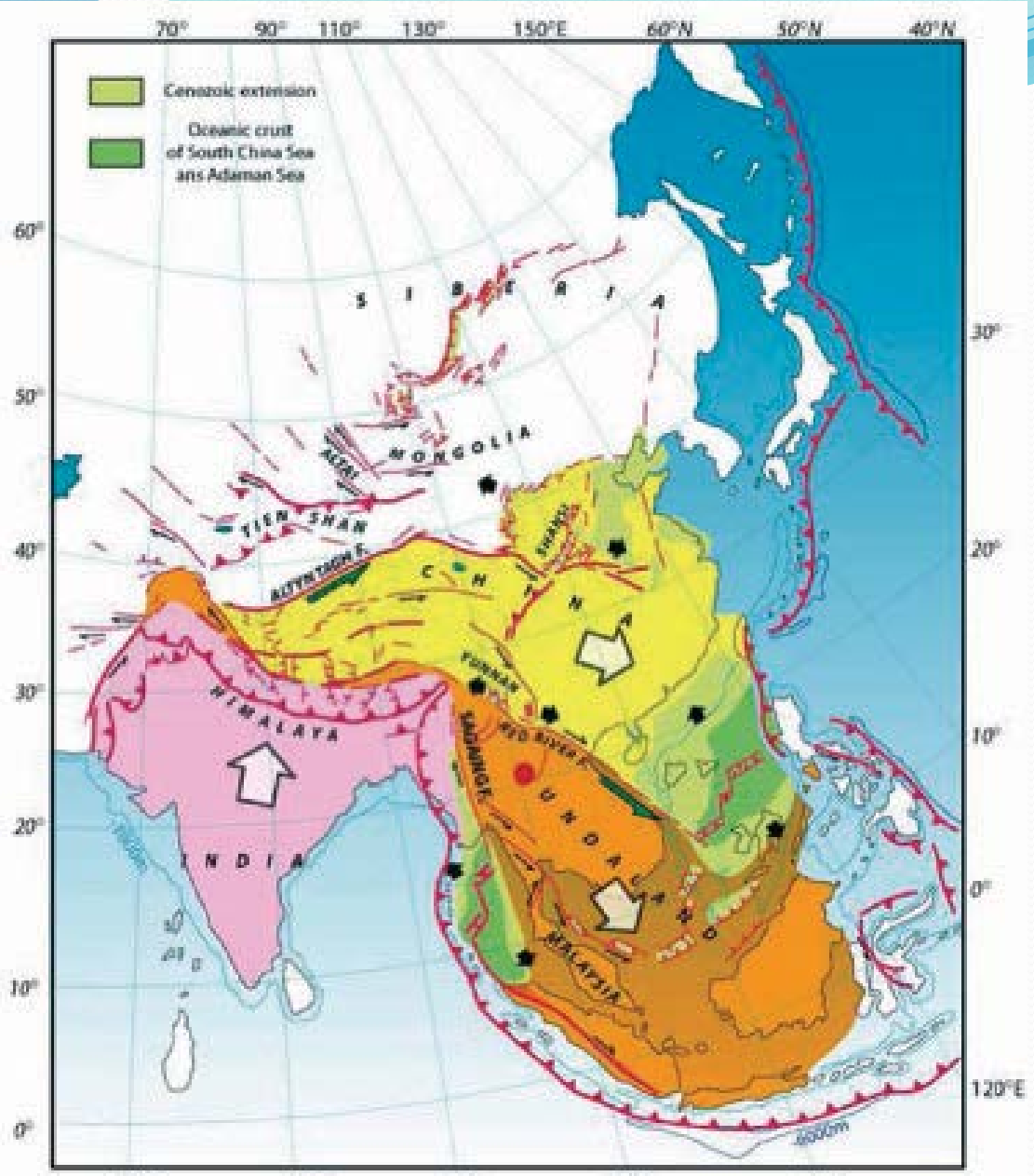
Geology and Mineral Resources of Myanmar

Dr Ye Myint Swe
Director General
DEPARTMENT OF GEOLOGICAL SURVEY AND MINERAL EXPLORATION, MINISTRY OF MINES

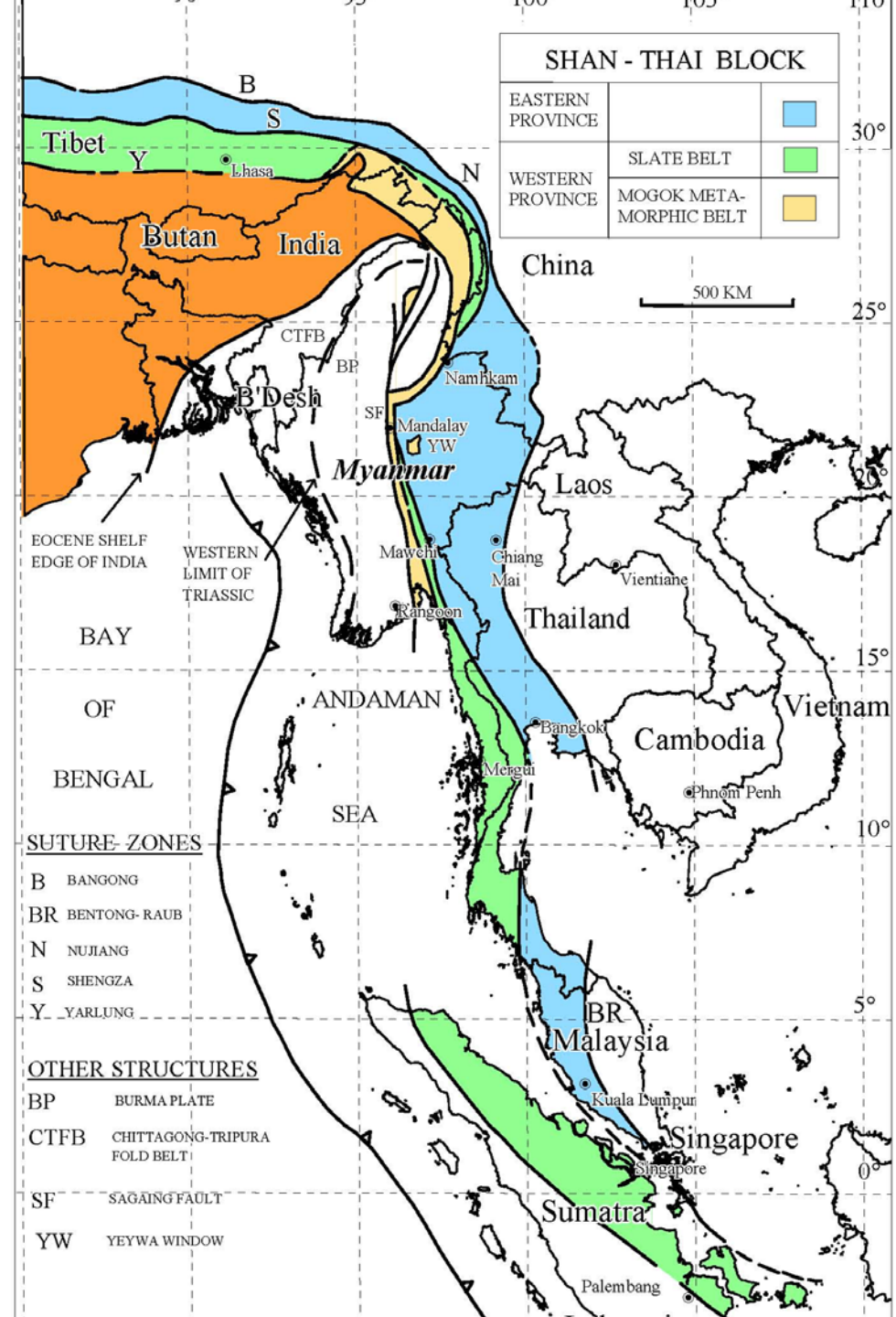
1. INTRODUCTION

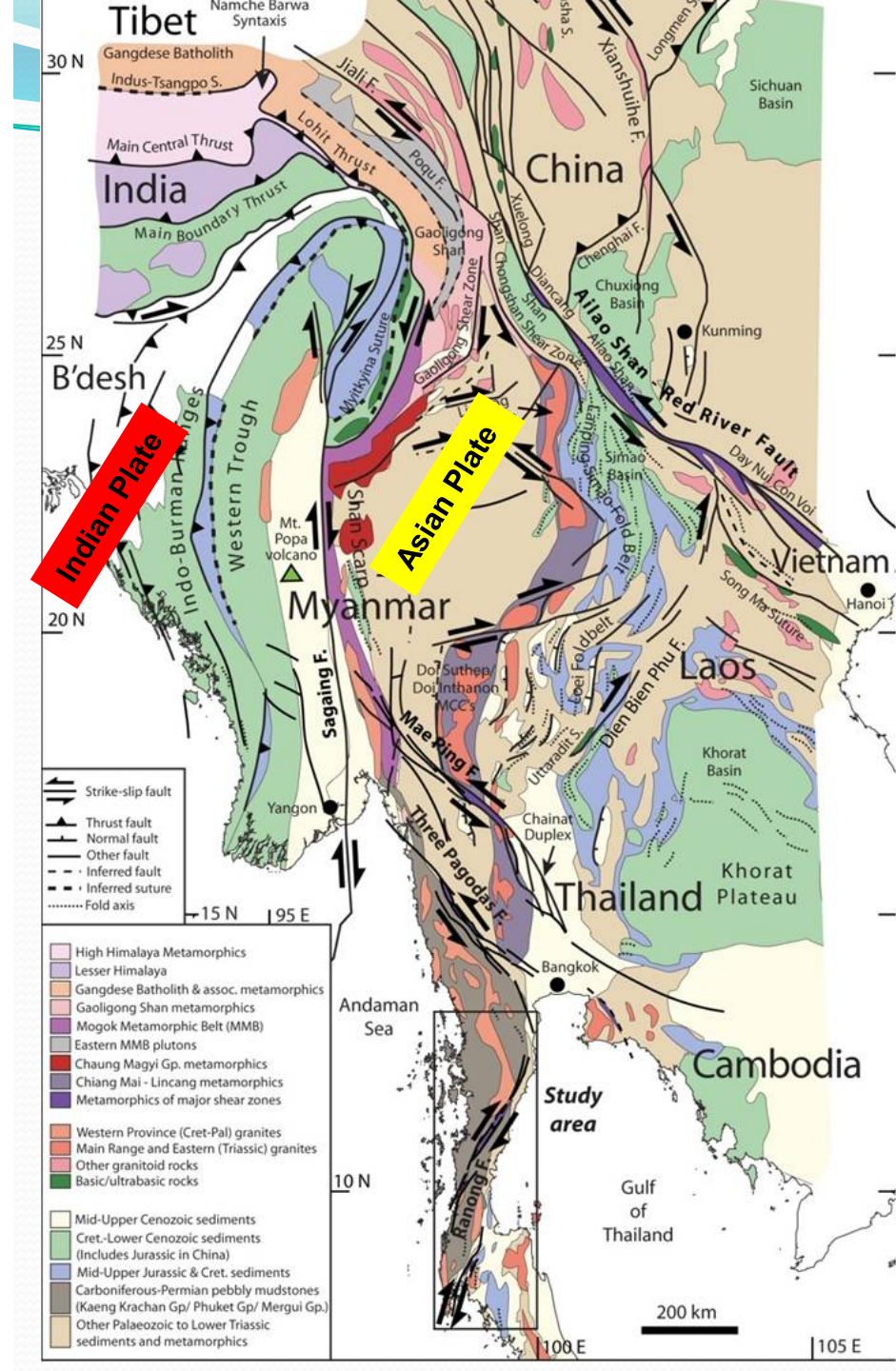
Area	**:**	**678528 sq.km**
Coast Line	**:**	**2100 km**
NS Extend	**:**	**2200 km**
EW Extend	**:**	**950 km**
Population	**:**	**60 millions(appx.)**
Region	**:**	**7**
State:	**:**	**7**
Location	**:**	**10º N to 28º 30‘N**
		92º30’E to101º 30’E



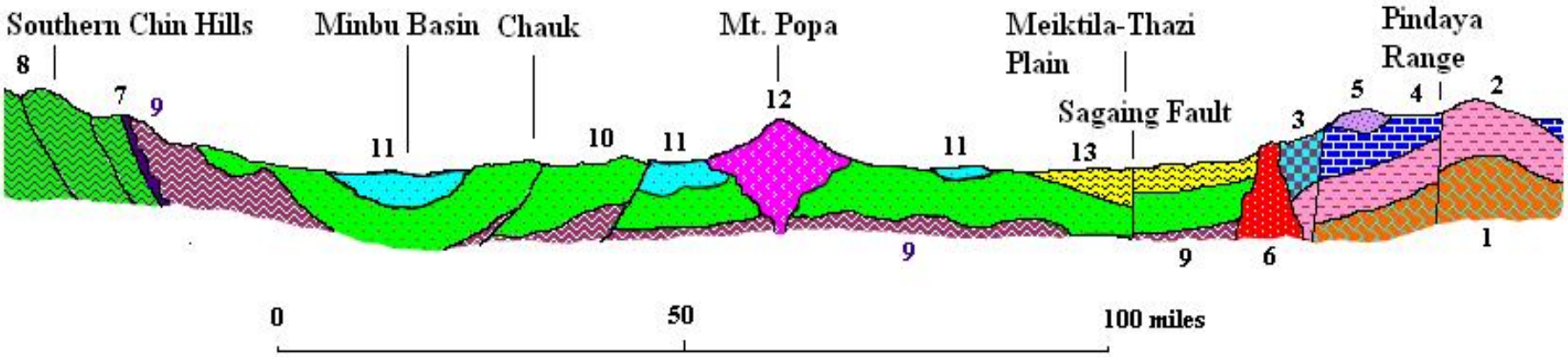


Regional Tectonic setting of Myanmar as a result of collision between Indian and -Asian plates


SHAN - THAI BLOCK
EASTERN PROVINCE
WESTERN PROVINCE
SLATE BELT
MOGOK META-MORPHIC BELT
B
S
N
Y
Tibet
Lhasa
Butan
India
China
500 KM
CTFB
BP
SF
YW
B'Desh
Namhkam
Mandalay
Myanmar
Laos
Mawchi
Chiang Mai
Vientiane
Rangoon
Thailand
BAY OF BENGAL
ANDAMAN SEA
Vietnam
Bangkok
Cambodia
Mergui
Phnom Penh
BR
Malaysia
Kuala Lumpur
Singapore
Sumatra
Palembang
EOCENE SHELF EDGE OF INDIA
WESTERN LIMIT OF TRIASSIC
SUTURE ZONES
B BANGONG
BR BENTONG- RAUB
N NUJIANG
S SHENGZA
Y YARLUNG
OTHER STRUCTURES
BP BURMA PLATE
CTFB CHITTAGONG-TRIPURA FOLD BELT
SF SAGAING FAULT
YW YEYWA WINDOW
30°
25°
20°
15°
10°
5°
0°
95
100
105
110


Tibet
Namche Barwa Syntaxis
Gangdese Batholith
Indus-Tsangpo S.
Jiali F.
Xianshuihe F.
Longmen S.
Sichuan Basin
Main Central Thrust
Lohit Thrust
Pogu F.
India
China
Main Boundary Thrust
Gaoligong Shan
Xuelong Shan
Chenghai F.
Chongshan Shear Zone
Diancang Shan
Chuxiong Basin
Ailao Shan
Ailao Shan Shear Zone
Kunming
Red River Fault
Day Nui Con Vol.
B'desh
Myitkyina Suture
Gaoligong Shear Zone
Indo-Burman Ranges
Western Trough
Indian Plate
Asian Plate
Shan Scarp
Mt. Popa volcano
Myanmar
Simao Basin
Vietnam
Hanoi
Song Ma Suture
Doi Suthep/ Doi Inthanon MCCs
Loei Foldbelt
Laos
Sagaing F.
Mae Ping F.
Dien Bien Phu F.
Uttaradit S.
Khorat Basin
Yangon
Chainat Duplex
Three Pagodas F.
Khorat Plateau
Thailand
Bangkok
Andaman Sea
Cambodia
Study area
Gulf of Thailand
Ranong F.
Strike-slip fault
Thrust fault
Normal fault
Other fault
Inferred fault
Inferred suture
Fold axis
High Himalaya Metamorphics
Lesser Himalaya
Gangdese Batholith & assoc. metamorphics
Gaoligong Shan metamorphics
Mogok Metamorphic Belt (MMB)
Eastern MMB plutons
Chaung Magyi Gp. metamorphics
Chiang Mai - Lincang metamorphics
Metamorphics of major shear zones
Western Province (Cret-Pal) granites
Main Range and Eastern (Triassic) granites
Other granitoid rocks
Basic/ultrabasic rocks
Mid-Upper Cenozoic sediments
Cret.-Lower Cenozoic sediments (Includes Jurassic in China)
Mid-Upper Jurassic & Cret. sediments
Carboniferous-Permian pebbly mudstones (Kaeng Krachan Gp/ Phuket Gp/ Mergui Gp.)
Other Palaeozoic to Lower Triassic sediments and metamorphics
200 km
30 N
25 N
20 N
15 N
10 N
95 E
100 E
105 E

GENERALIZED GEOLOGICAL CROSS-SECTION ACROSS MYANMAR, APPROXIMATELY ALONG LATTITUDE 21° N
(Vertically Scale greatly exaggerated)



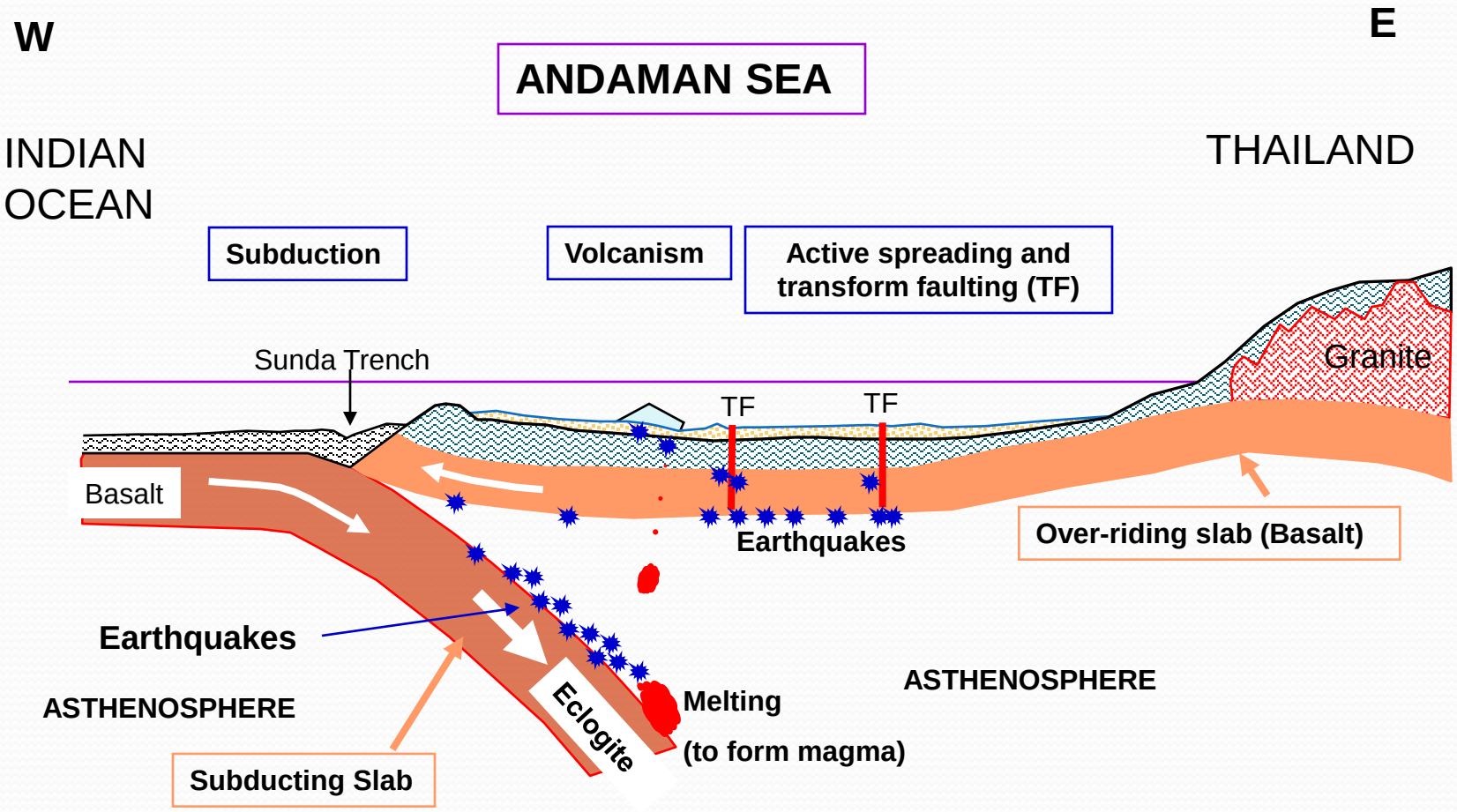
1_ Chaung Magyi Group; 2_ Lower Paleozoic units; 3_ Lower Carboniferous units; 4_ Plateau Limestone
5_ Jurassic Units; 6_ Mesozoic granitoids; 7_ Upper Cretaceous-Paleocene ultrabasic rocks; 8_ Miocene-Eocene flysch
9_ Eocene molasse; 10_ Pegu Group; 11_ Irrawaddy sandstones; 12_ Upper Cenozoic Volcanics; 13_ Alluvium

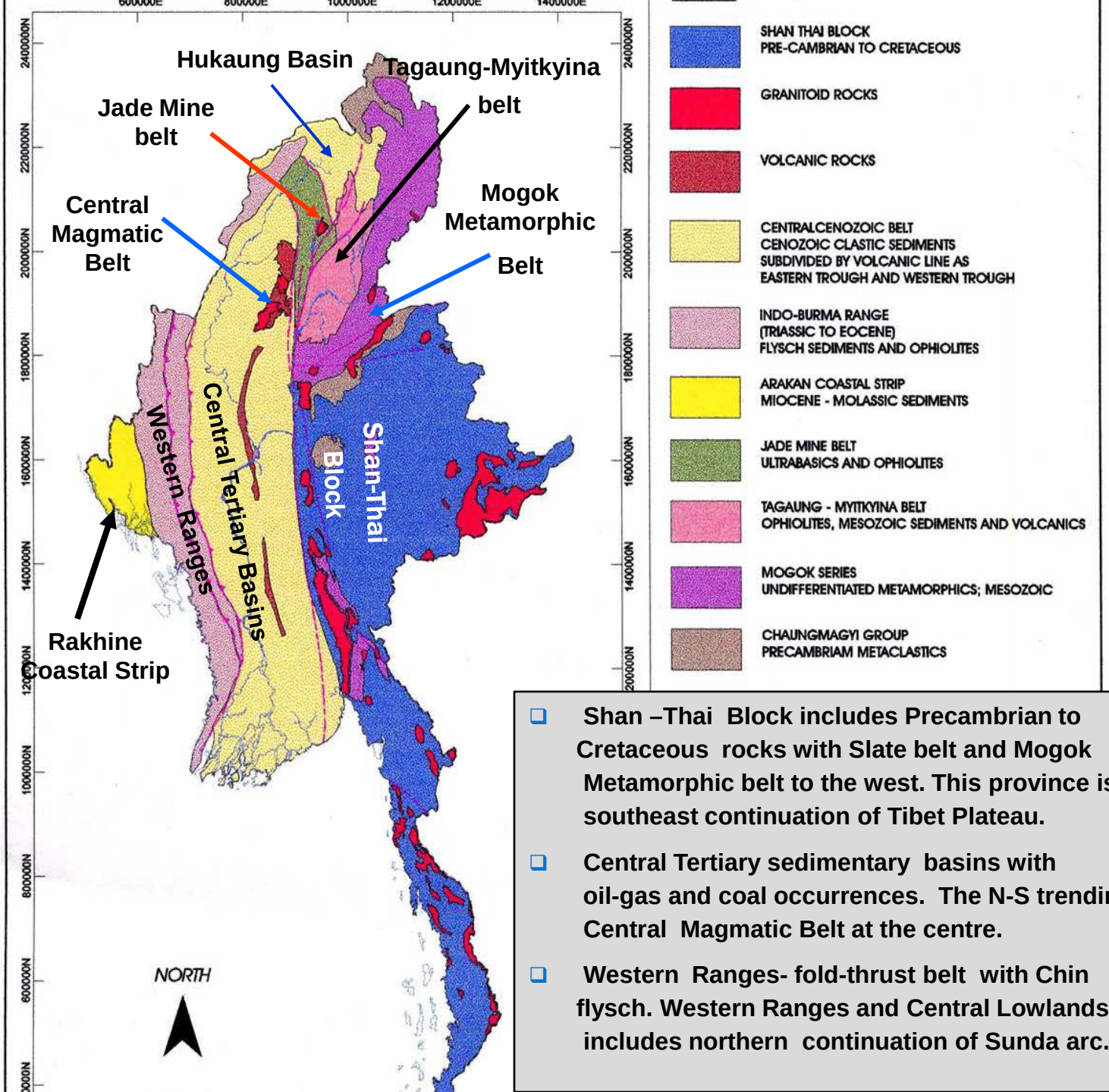
Dr. U Thein, 1992

GENERALIZED GEOLOGICAL CROSS-SECTION ACROSS MYANMAR

Three modes of earthquake generation in the Andaman Sea

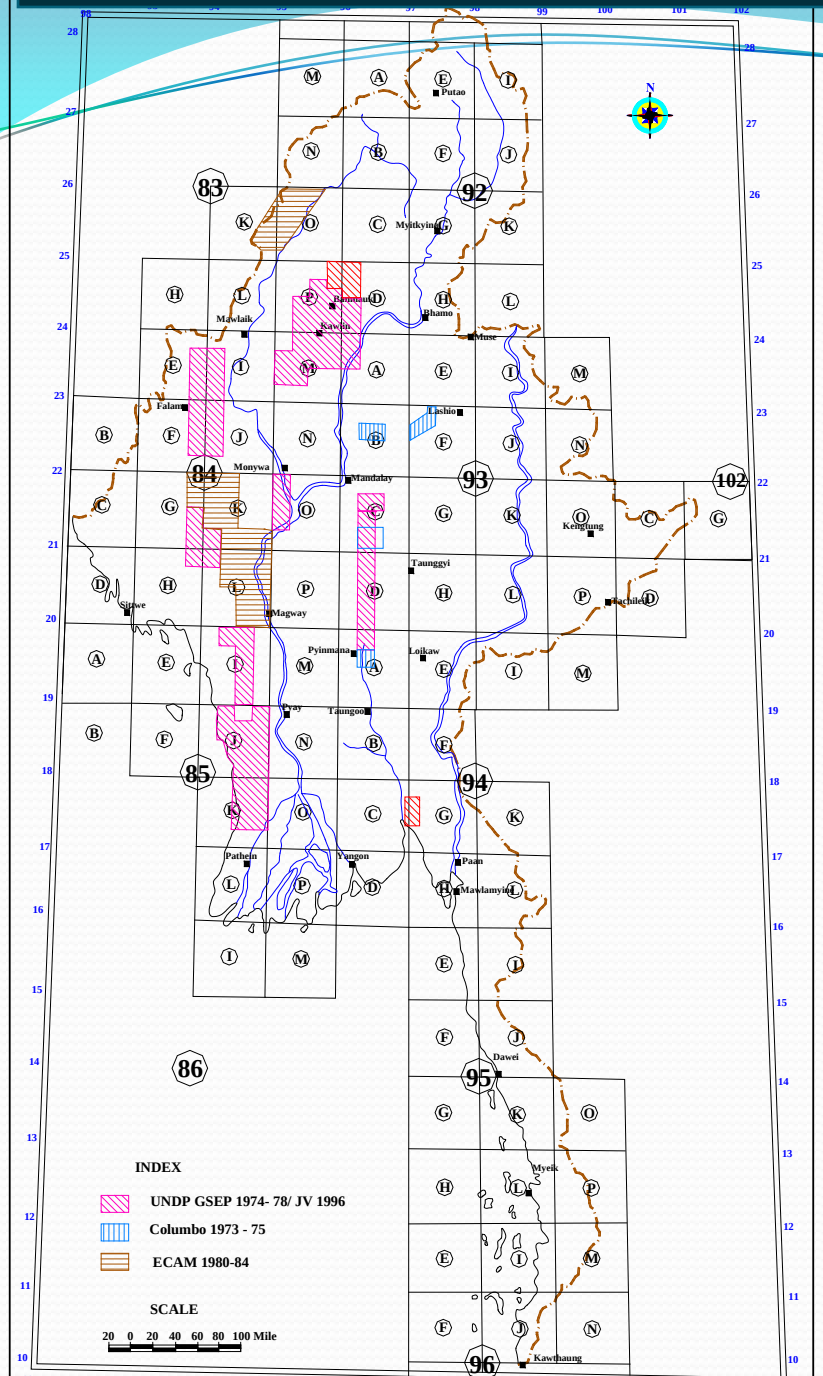
(Schematic tectonic cross-section along Lat 11˚N)



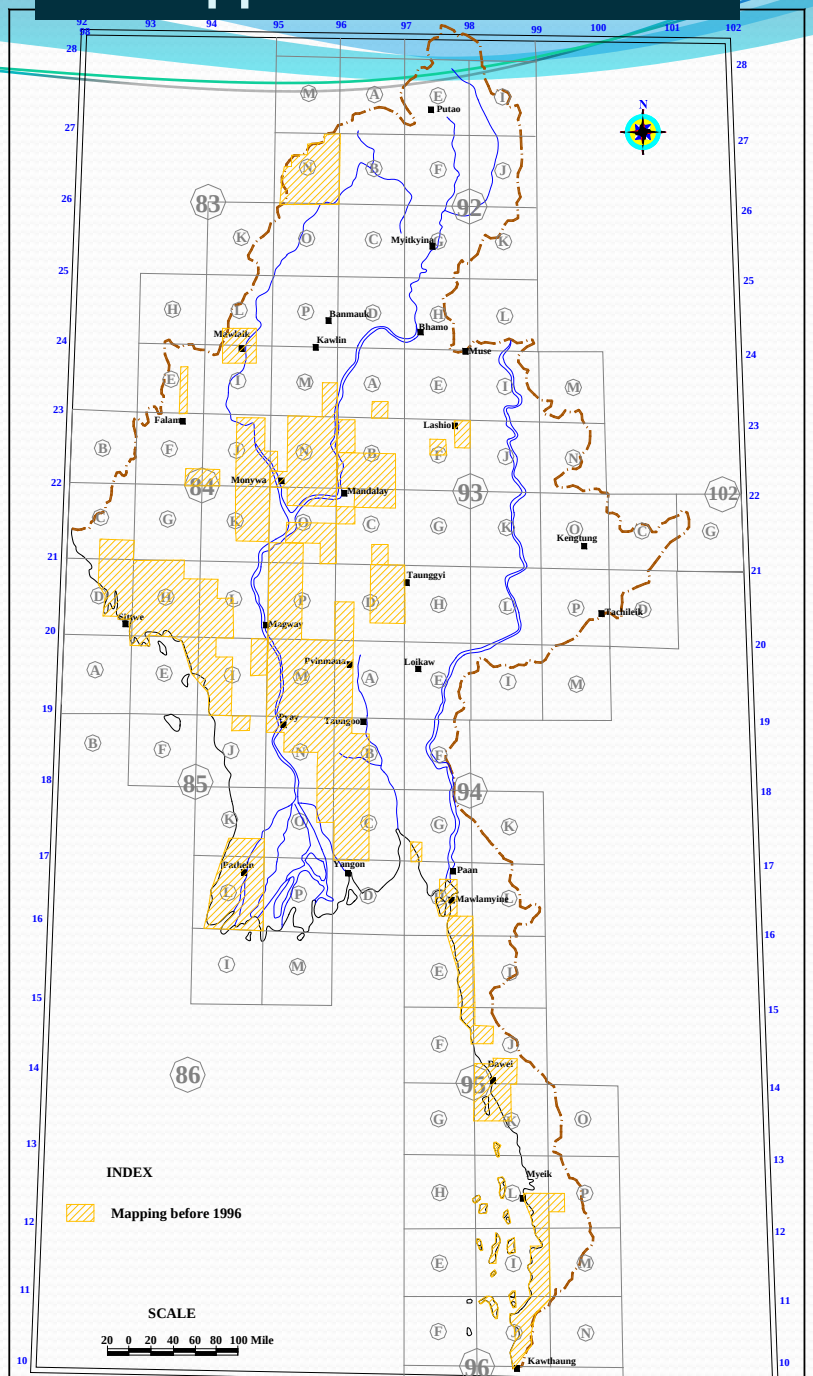


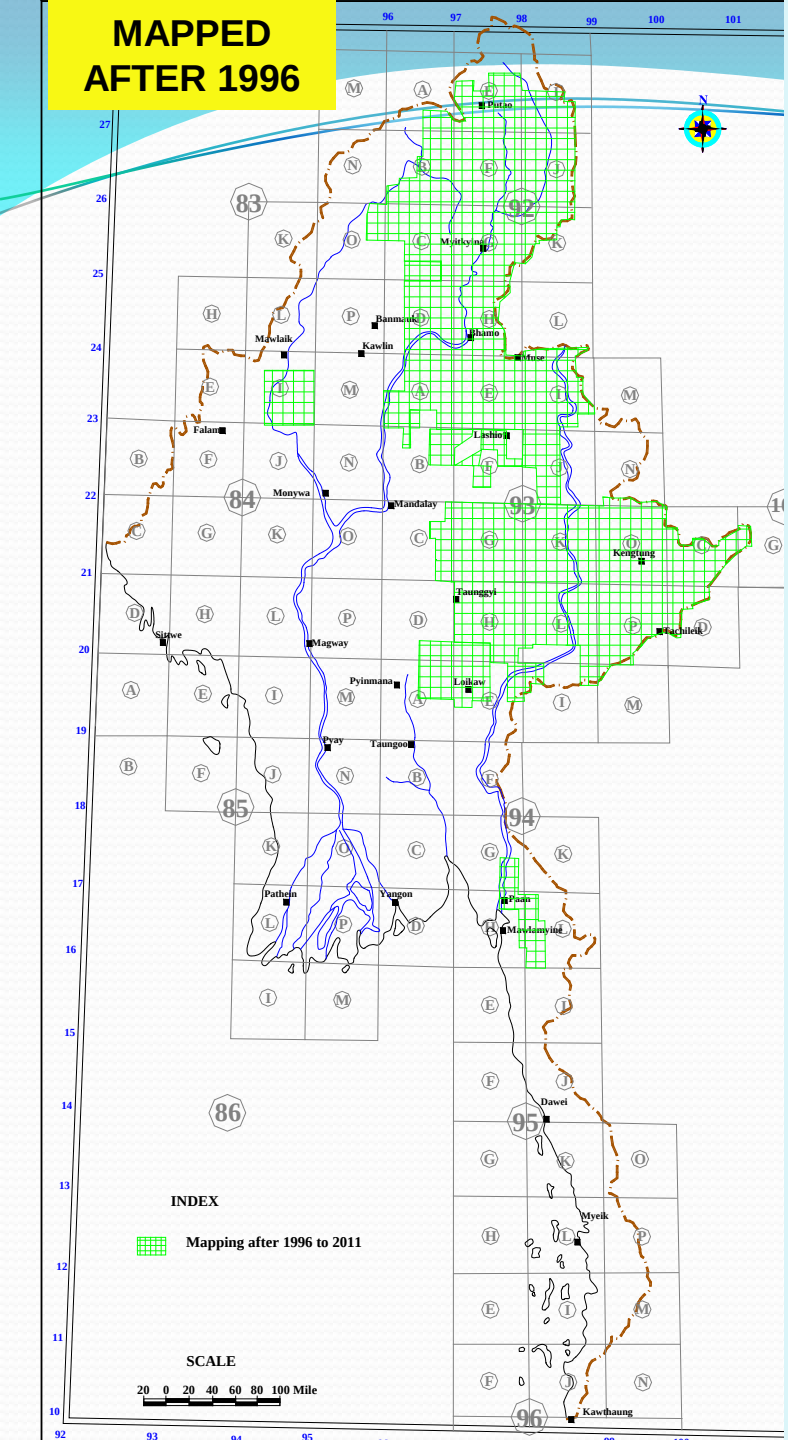
- Shan –Thai Block includes Precambrian to Cretaceous rocks with Slate belt and Mogok Metamorphic belt to the west. This province is southeast continuation of Tibet Plateau.
- Central Tertiary sedimentary basins with oil-gas and coal occurrences. The N-S trending Central Magmatic Belt at the centre.
- Western Ranges- fold-thrust belt with Chin flysch. Western Ranges and Central Lowlands includes northern continuation of Sunda arc.

Mapped by UN, COLUMBO & ECAMS



Mapped before 1996





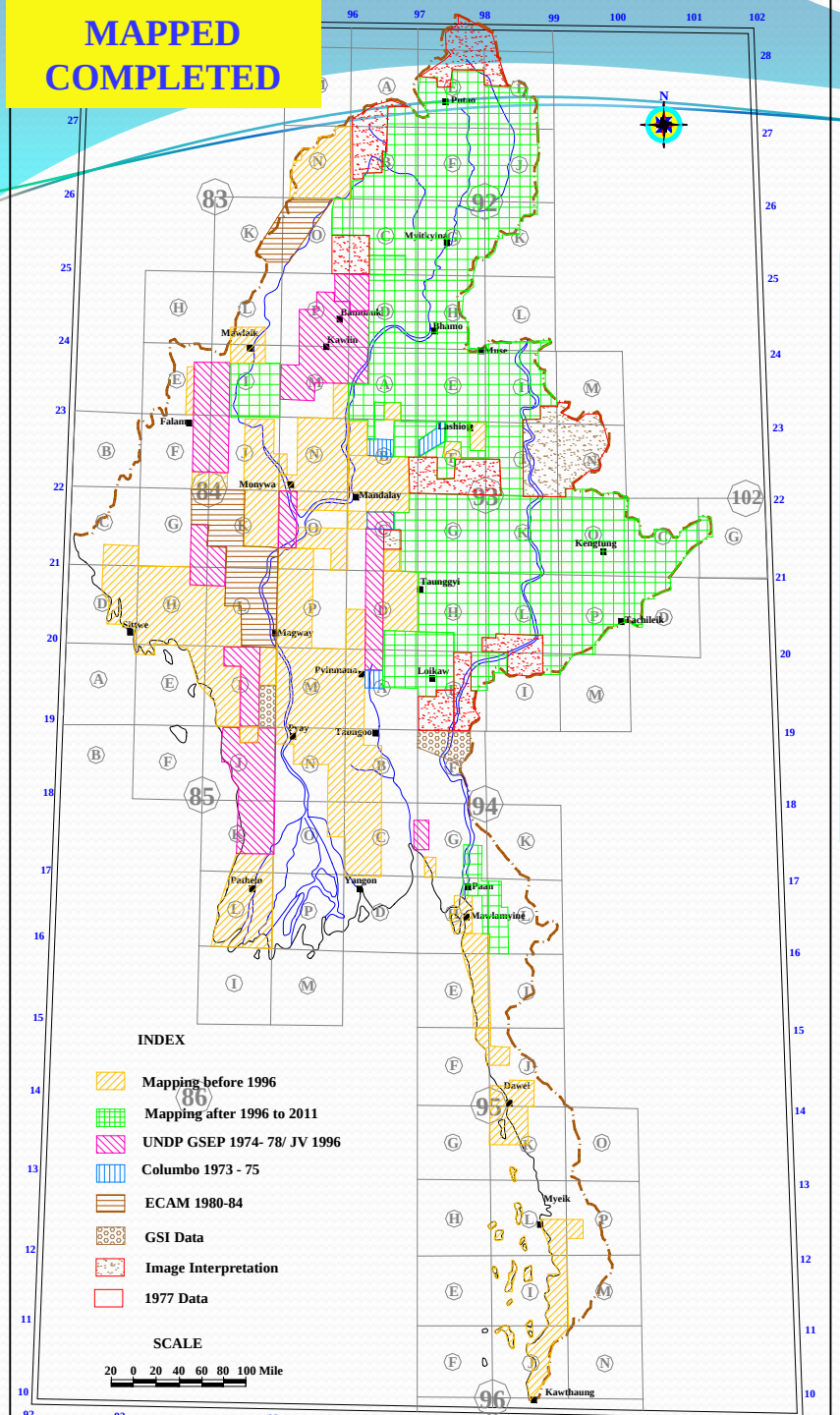
From 1996, DGSE has carried out the country wide regional geological mapping projects especially at the remote area of Kachin, Shan North, Shan East, Shan South, Kayah, Kayin and Sagaing region.

Due to the intensive operation of the field parties, most of the remote area were completed in 2007-08. The remaining areas are ice-capped mountains of the northern part and Wa region and un accessible area of Kayin, Mon, Rakhine, Kayah, Tanintharyi and Naga Hills.

These remaining areas were interpreted by the Remote Sensing and aerial photo interpretation.

In 2008, The updated Myanmar Geological map has completed and registered as a copy rihgt in 1:100000 scale digital format with GIS application.

MAPPED COMPLETED



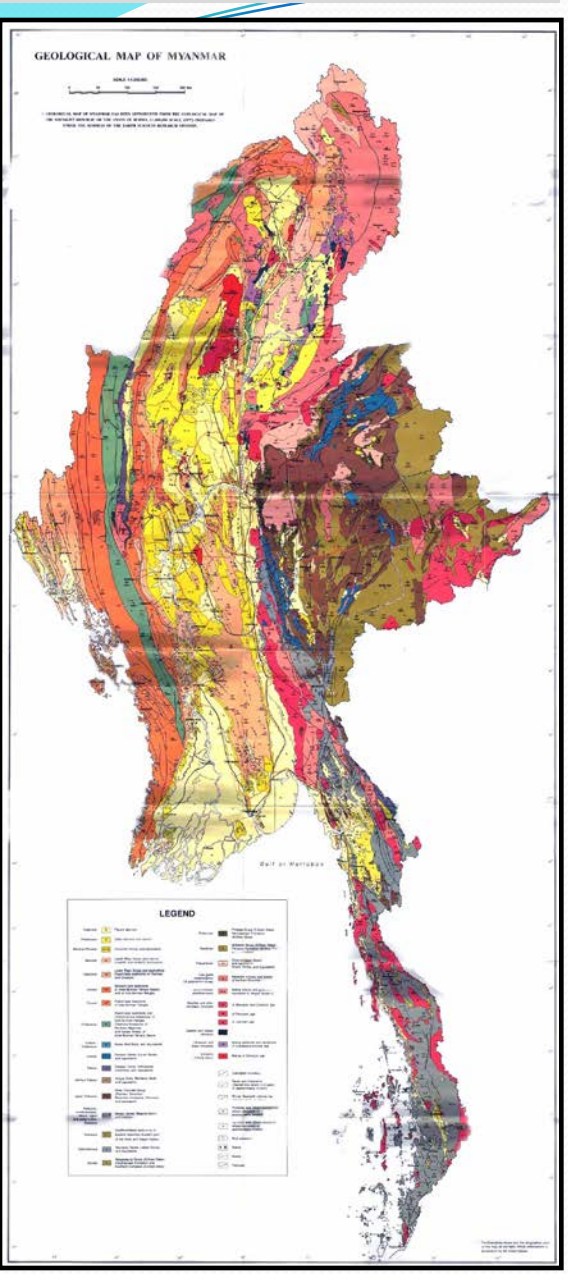
STATUS OF GEOLOGICAL MAPPING

Area extent of Myanmar – 261227 sq miles

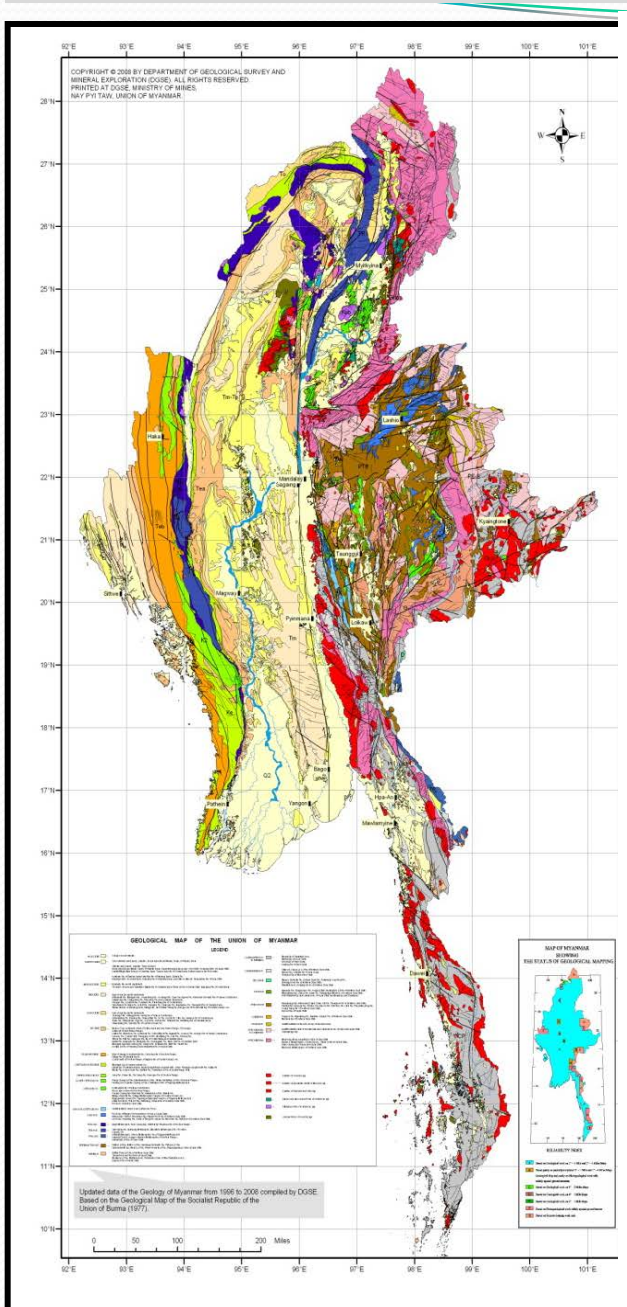
Geological mapping area(on ground) ~70%

Geological mapping (by the aid of Aerial Photos & RS-GIS techniques) ~30%

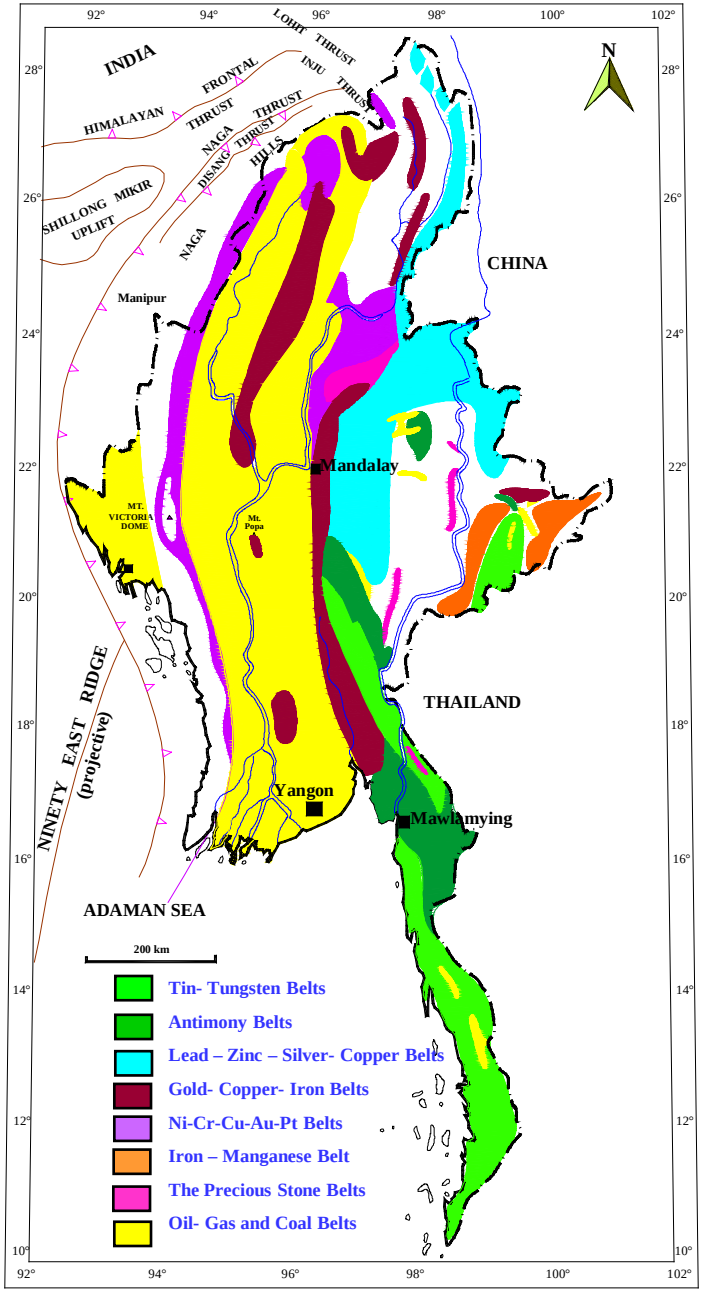
Geological Map of Myanmar (1977)



Geological Map of Myanmar (2008),



MINERAL PROVINCES OF MYANMAR



In Myanmar, Mineral occurrences include

1. *Metallic ore minerals*

Iron & metals for steel alloys- ***Fe, Mn, Cr, Ni, Mo***
Base & non-ferrous metals – ***Pb, Zn, Cu, Sn, W, Sb & Ti***
Precious & rare metals- ***PGM, Au, Ag, Nb, Ta***

2.*Industrial minerals & non-metallic raw minerals*

Chemical & fertilizer minerals- ***Barite, fluorite, Gypsum, rock salt***

Ceramic & refractory minerals- ***clay, limestone, dolomite, feldspar, quartz, glass sand***

Construction & building materials- ***Decorative stones, road materials, limestone for cement***

3. *Preceous & semi-precious Gemstones*

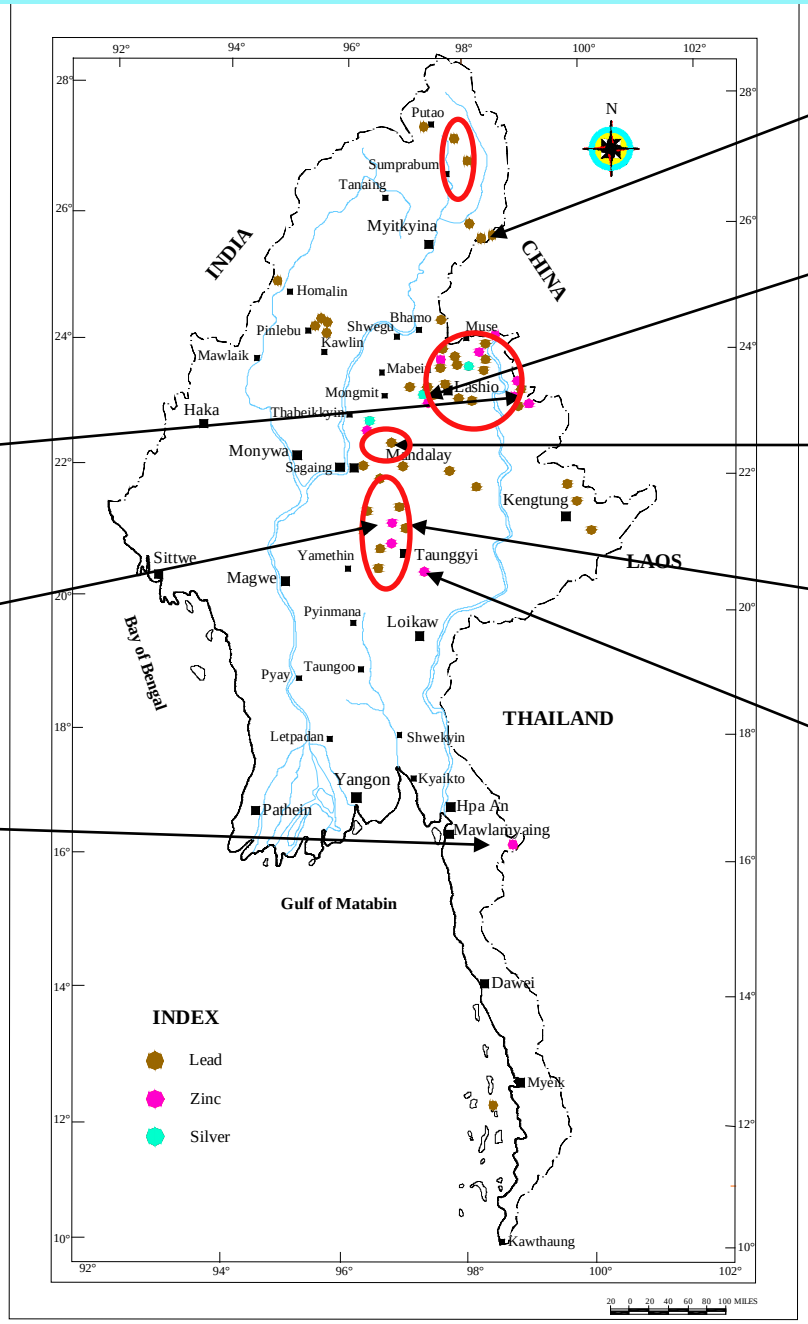
Ruby, Sapphire, Jade, Diamond, etc

4. *Fuel minerals*

(oil, natural gas, oil shale, coal,

DISTRIBUTION OF LEAD-ZINC-SILVER DEPOSIT

Lead Zinc Occurrences = 291
Potential = 44 million ton



Panwa (Kachin)
Pb,Zn -1.06%
12.5 million (Possible)

Bawdwin (Shan North)
Pb,Zn -5%
12.8 million (Probable)

Phaleng(Shan North)

Yadanatheingi (Shan North)

Paungdaw (Mandalay)

Bawsaing (Shan North)

LonChein(Shan South)
Zn - 36%
0.234million (Possible)

Mawhki (Kayin)
Zn - 0.3%
0.332 million (Possible)

Lead-Zinc-Silver Deposits

-more than 100 occurrences of Pb-Zn-Silver mineralization in Myanmar

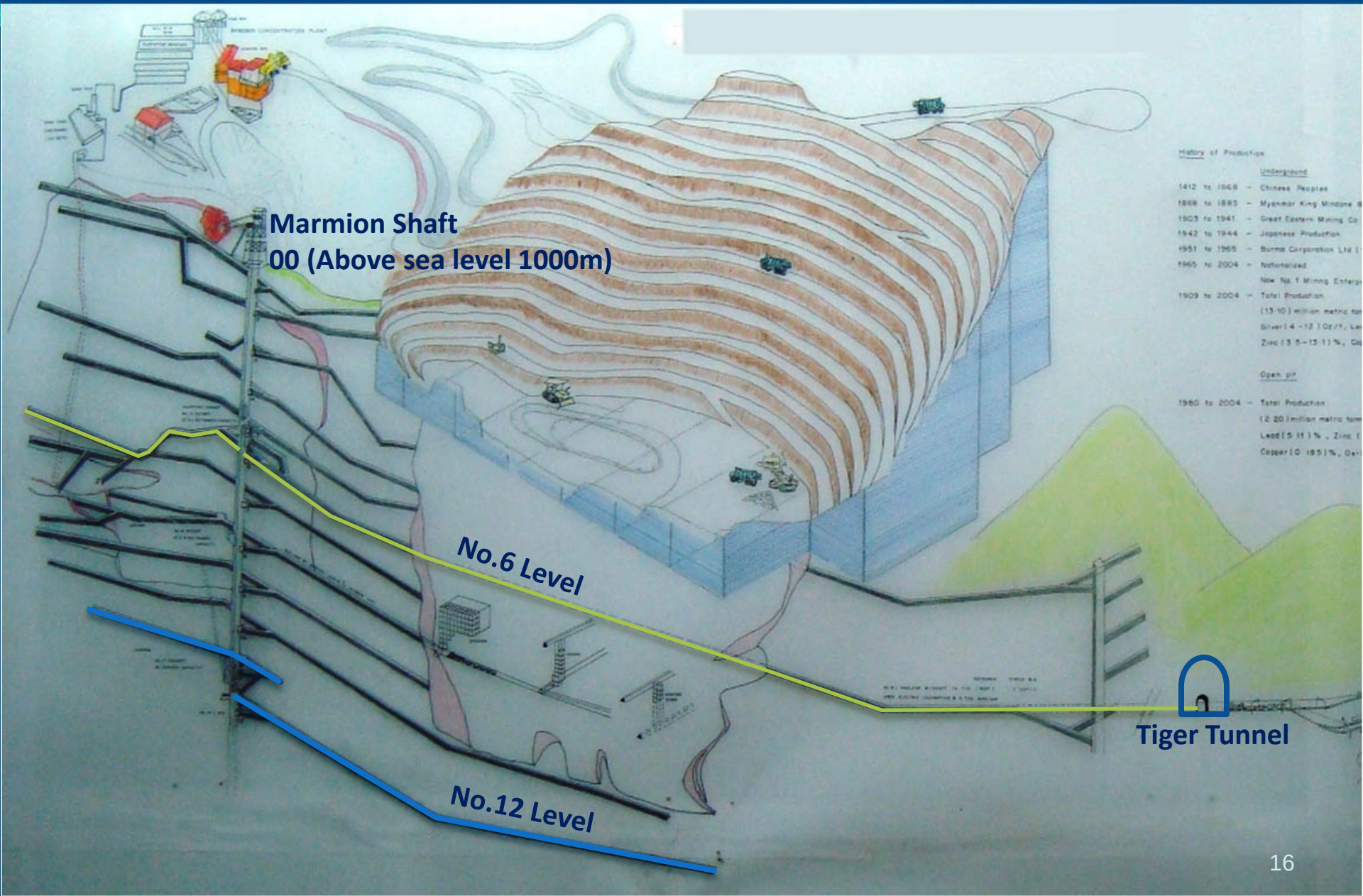
-mineralization occurs as five different styles

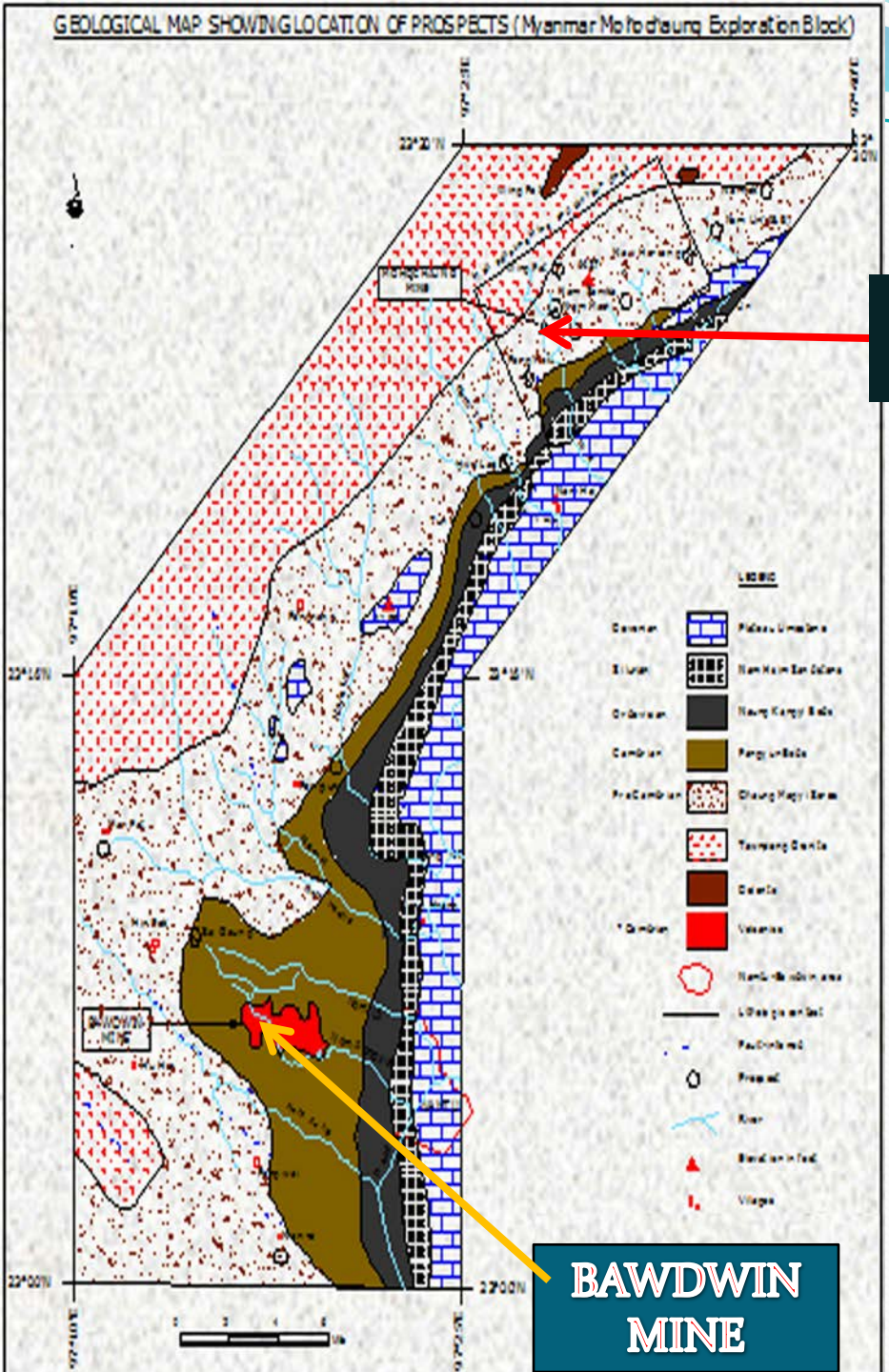
1. Volcanogenic massive sulphides type(VMS) at Bawdwin mine
2. Massissippi valley type deposit at Bawsaing mine
3. Cavity filling vein-type in Yadanatheingi mine
4. in veins and skarn type near the contact between granitic rock and marble at Phaungdaw mine
5. Zinc carbonate deposit (secondary deposit) at Long Hken mine

Bawdwin Mine

The Largest Lead-Zinc-Silver Mine in Myanmar

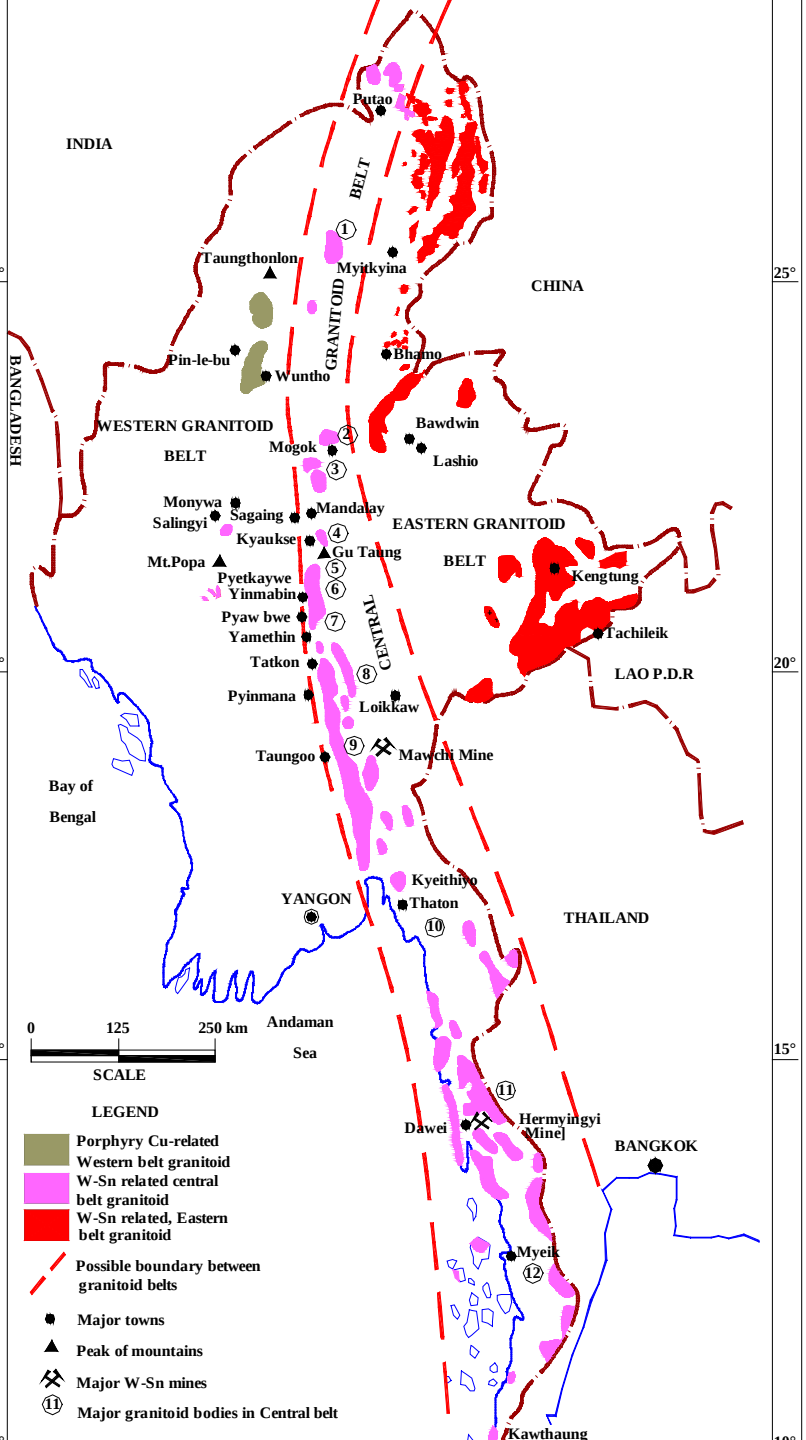
Main shaft and underground mine





Regional Geologic Map of the Bawdwin Area

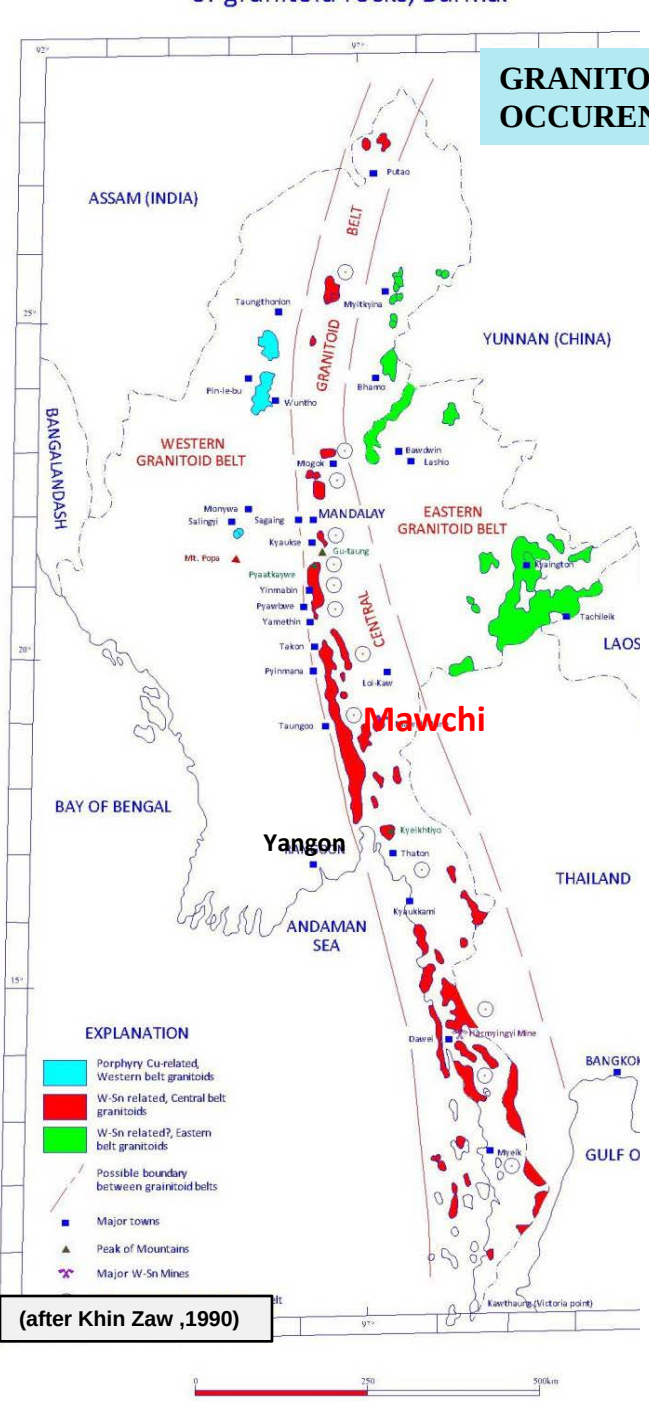
Bawsaing Pb-Zn Mine, Southern Shan State



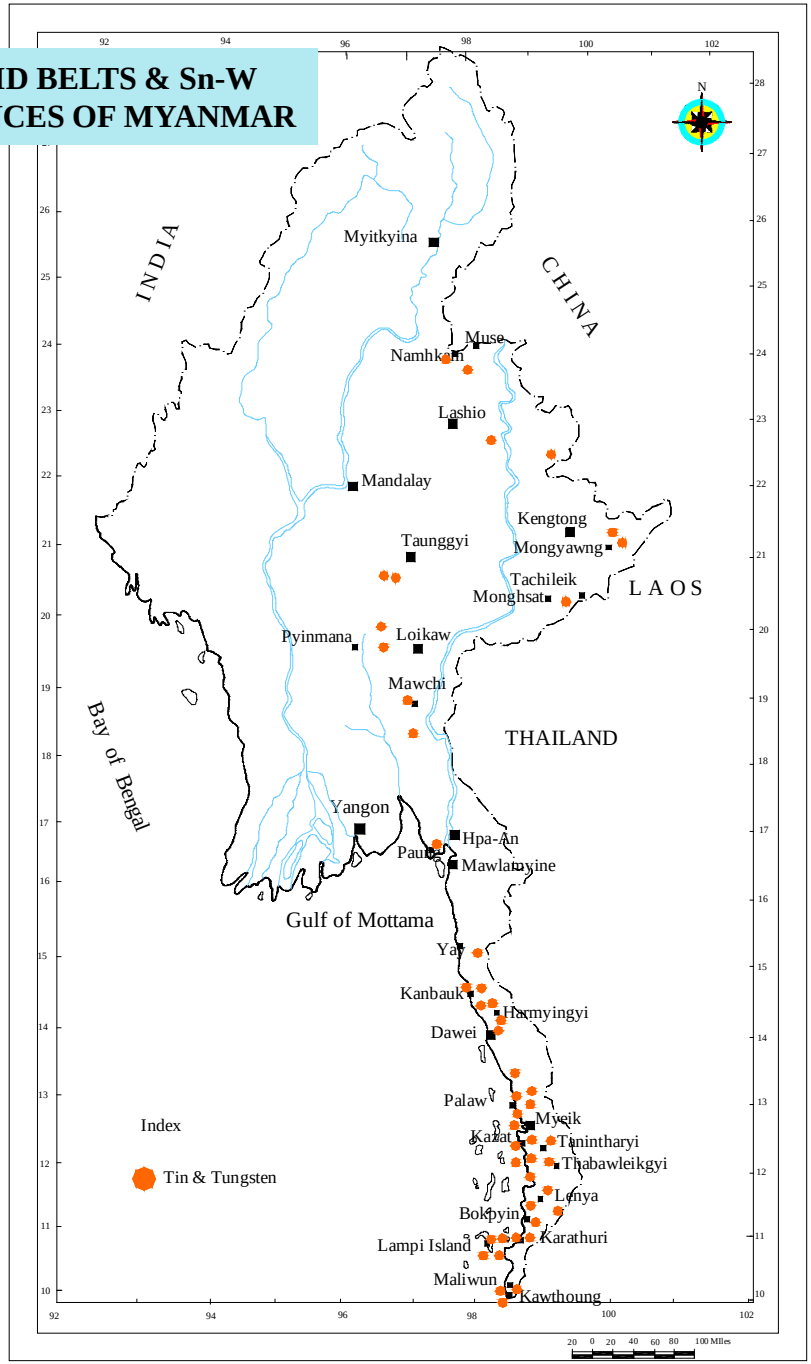
REE POTENTIAL IN MYANMAR

- ❖The western Granitoid Belt -Central Volcanic Arc
- ❖The Central Granitoid Belt -Shan Scarp – Tanintharyi Region
- ❖The Eastern Granitoid Belt -Eastern High Lands

GRANITOID BELTS & Sn-W OCCURENCES OF MYANMAR



(after Khin Zaw ,1990)



Western Granitoid Belt

-Cretaceous to Lower Eocene

-characterized by high-level intrusions associated with Porphyry Cu (Au) related, younger volcanics

-emplaced as a magmatic-volcanic arc

Central Granitoid Belt

-Upper Cretaceous to Lower Eocene

-characterized by mesozonal plutons associated with

vein type *Sn-W* deposits

-associated with abundant pegmatites and aplites and rare co-magmatic volcanics

Eastern Granitoid Belt

-? Triassic

-characterized by medium to coarsely porphyritic

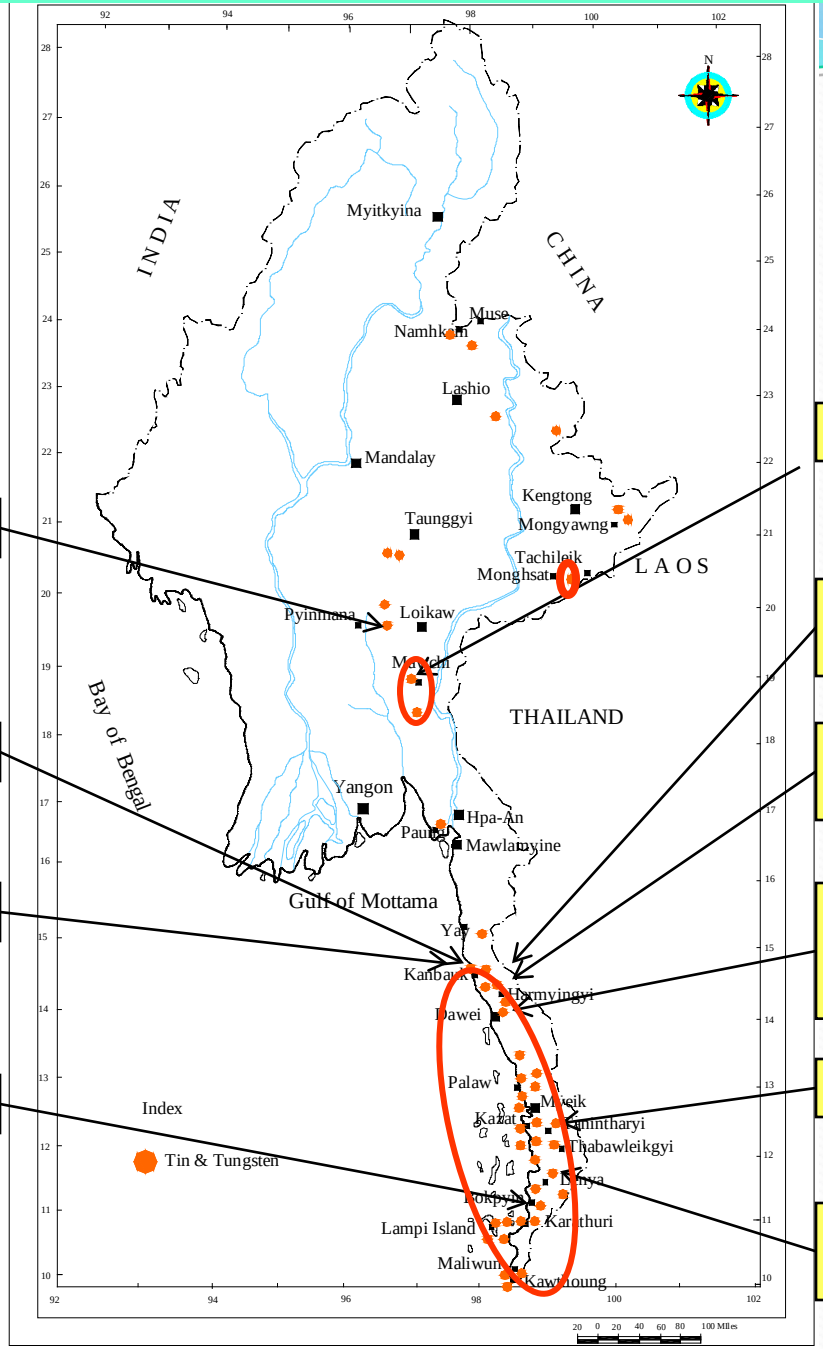
-mesozonal and *Sn-W* bearing granites

DISTRIBUTION OF TIN - TUNGSTEN DEPOSITS

Tin- Tungsten deposits= 480

Potential = 40 million tons

Sn-W deposits, mainly associated with granitic intrusions along the tanintharyi and western margin of shan plateau



Padatchaung (Primary)

Heinze (Placer)

Kanbauk(Primary/ Placer)

Atwin Bokpyin (Placer)

Mawchi (Primary)

Hermyingyi (Primary)

Heinda (Placer)
)

KyaukmeTaung,
Pagaye(Placer)

Theindaw(Placer)

Manawlon(Placer)

Tin-tungsten Deposits

-one of the most important mineral resources in Myanmar

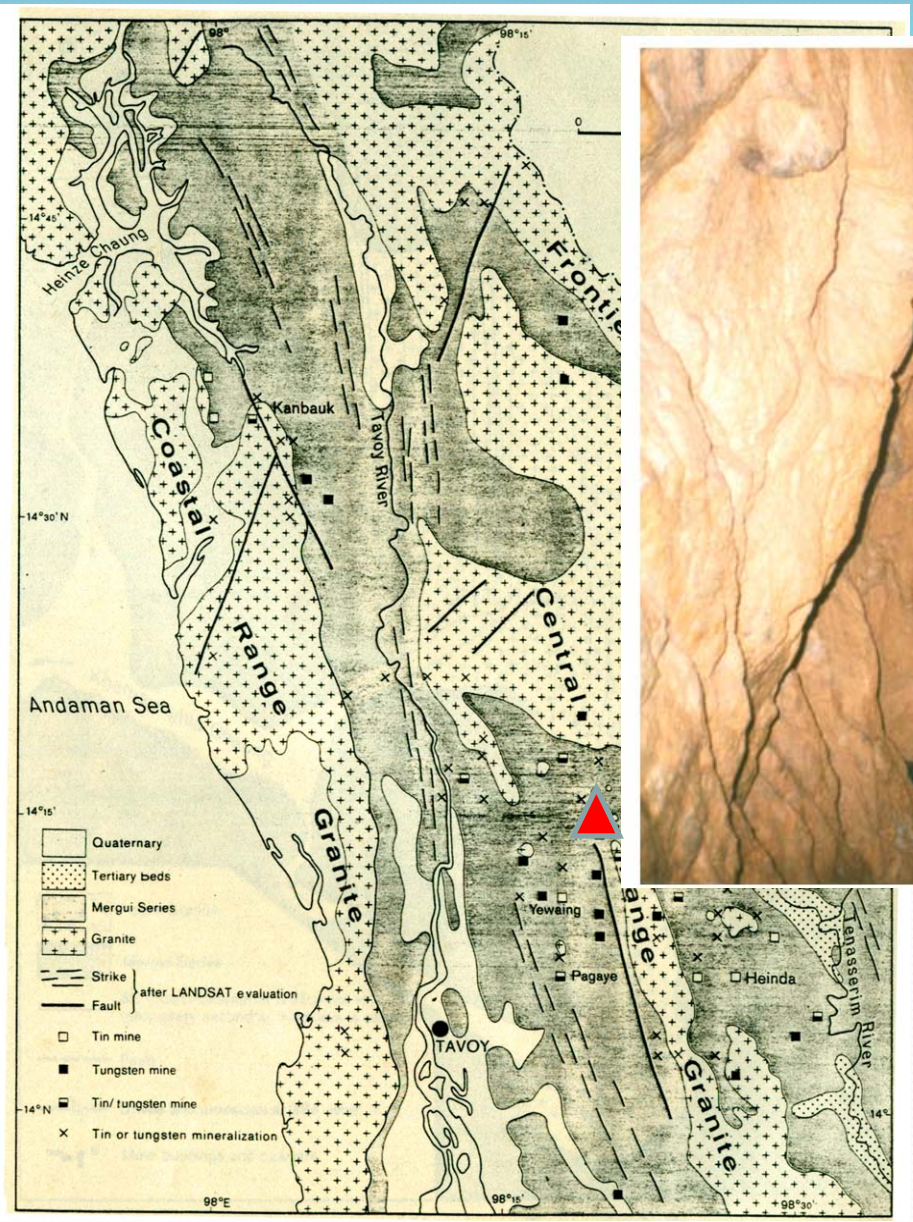
-occurs along the granitic belt in SE Asia peninsula (distributed over more than 1200 Km in Myanmar with more prominent in Tungsten toward the north,

-passing through the Tanintharyi Division, Kayin, Mon, Kayah & Shan states and east of Pyinmana.

-Tin-tungsten ores occur in close association with granitoids and related pneumatolytic rocks emplaced during Jurassic, Cretaceous and possibly Triassic. The country rocks of these intrusive masses consist of the clastic Mergui Series, Taungnyo Group, Mawchi Series and Lebyin Group.

-Most of the cassiterite is mined from placers while tungsten is mined from hard rock veins.

Hermyingyi Sn-W mine, Dawei

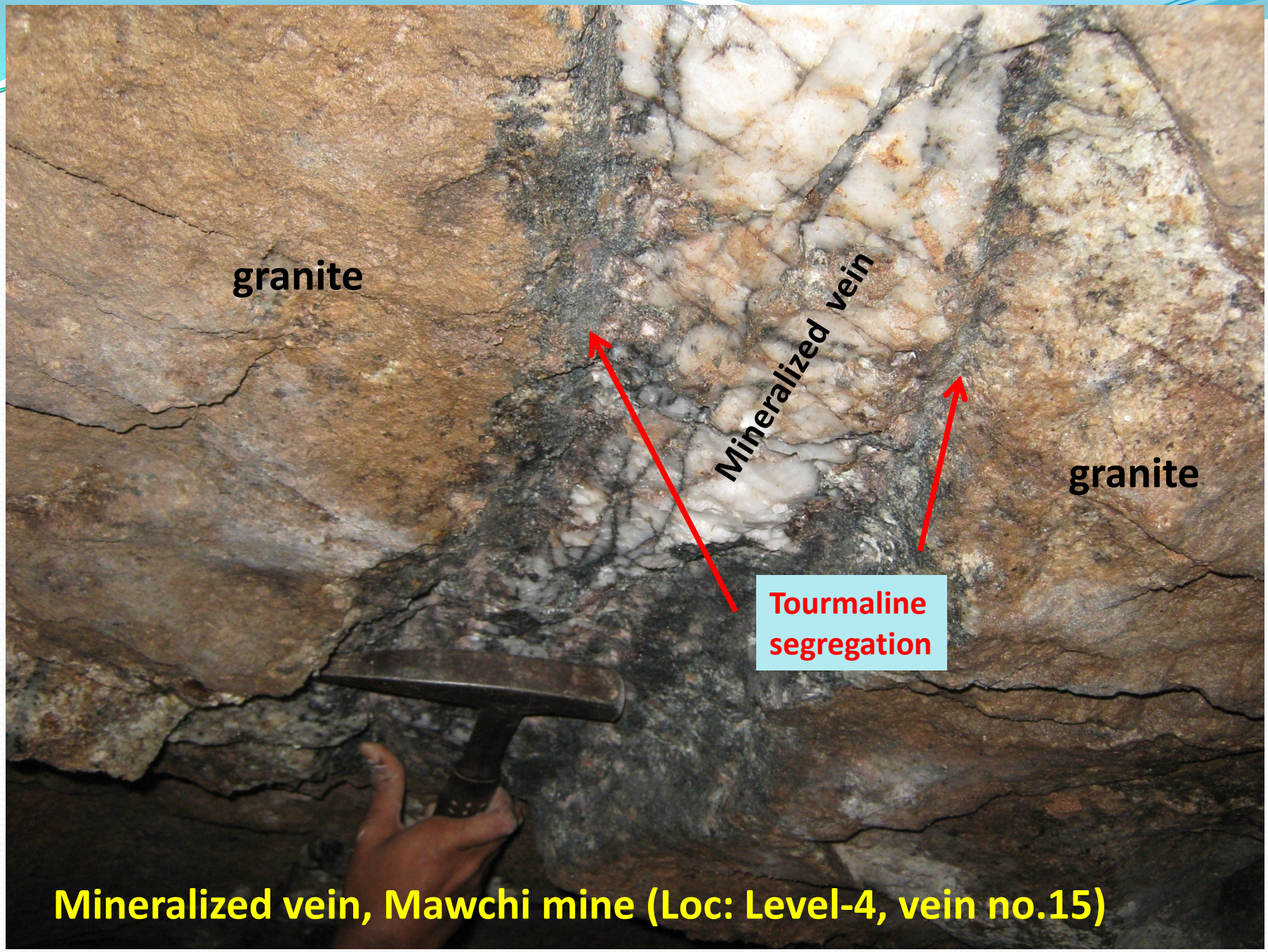


Location Map of the HerMyinGyi Mine

Main Tunnel of Hermyingyi Mine

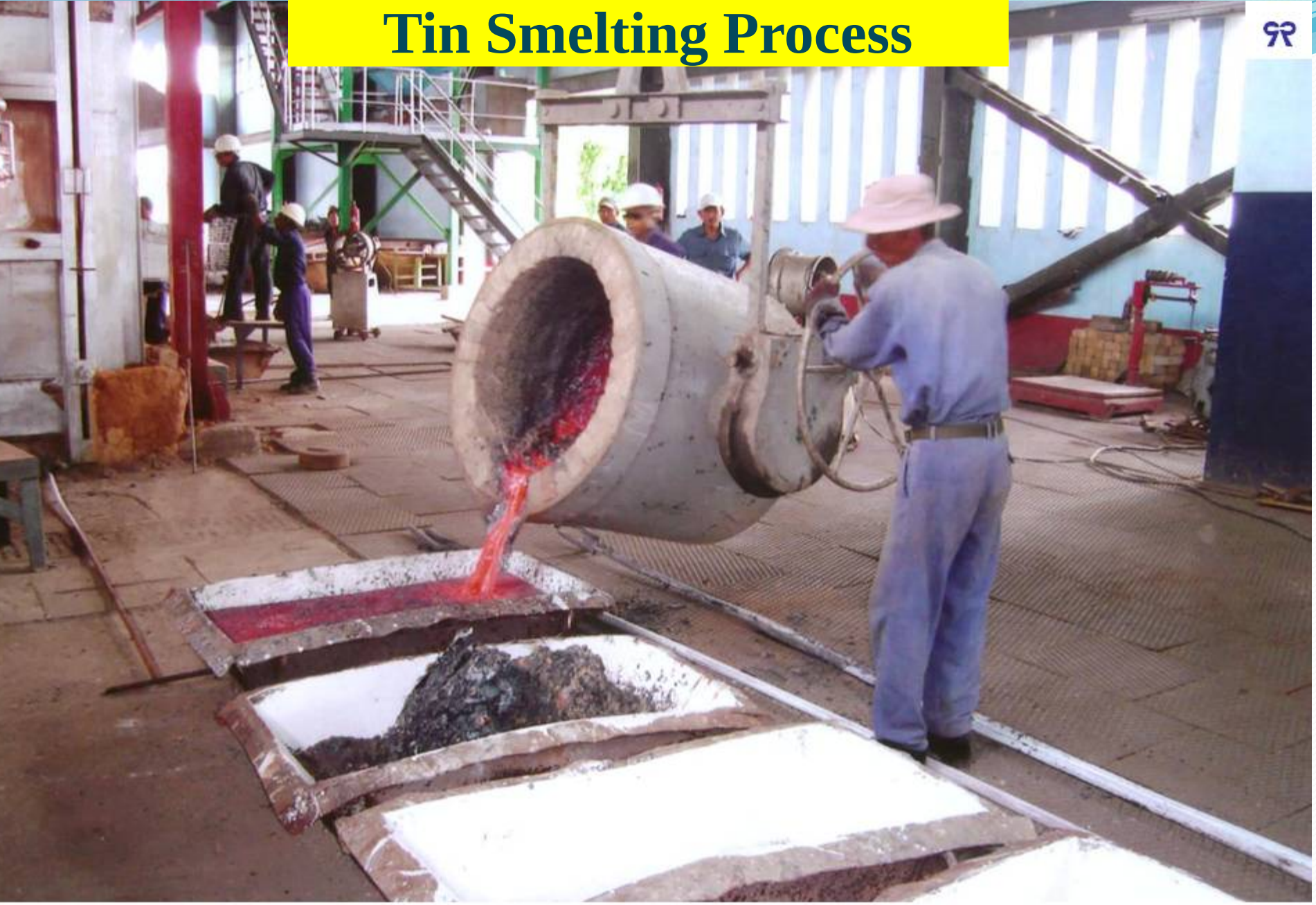
Bucket Dredger in Tin-tungsten mining


Mawchi Sn-W mine,
Kayah State



Mineralized vein, Mawchi mine (Loc: Level-4, vein no.15)

Tin Smelting Process



5 Tons/ day furnace မှထွက်ရှိလာသော Erode Tin များအား သံလွင်းထဲထည့်သွင်းနေပုံ

DITRIBUTION OF COPPER DEPOSITS

Shangalon
Cu -0.23 %
9 million (Possible)

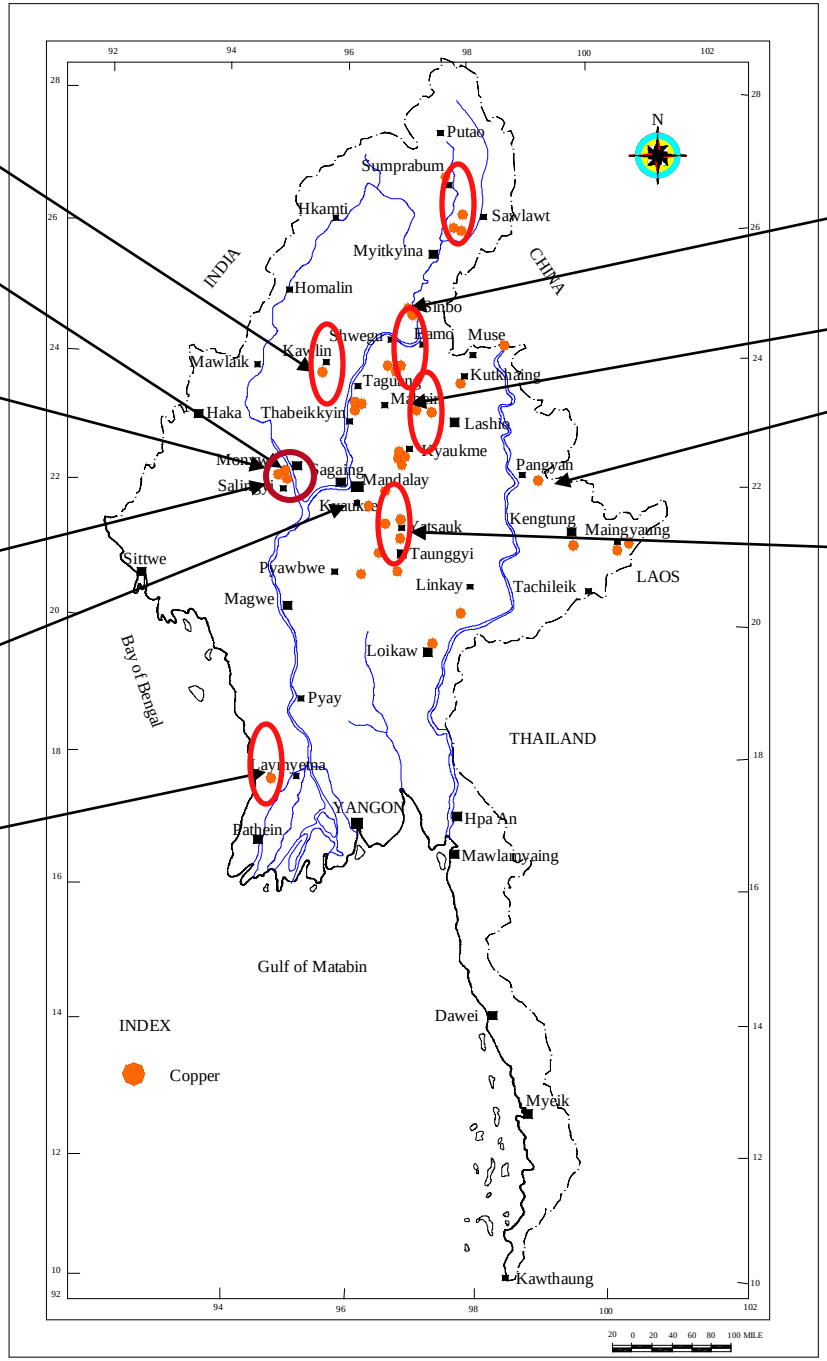
KyesinTaung
Cu - 0.77 %
66.5 million (Possible)

SabeTaung & south
Cu - 0.7 to1.01 %
27.86 million (Possible)

Letpadaung
Cu - 0.4 %
1478 million (Possible)

Sabe Taung
Cu - 1.51 %
0.88 million (Possible)

Laymyetna
Cu - 0.8 to 2 %
0.28 million (Possible)



Sinbo- Nankesan

Panmakut Manna

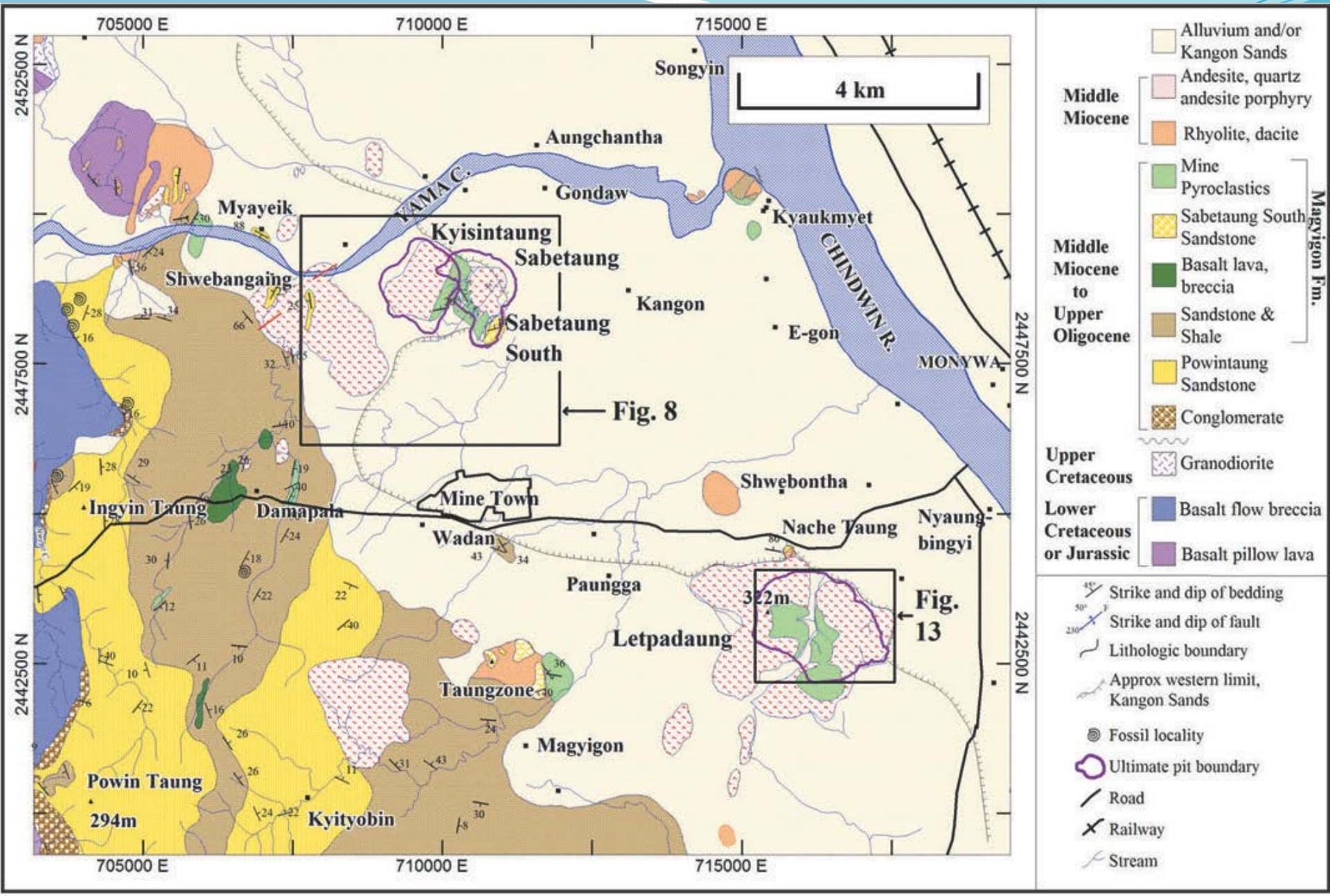
Panpwe KyaukTaung

Kweeight Taung

-more than 50 occurrences copper mineralization in Myanmar

-The copper mineralization within the central volcanic arc started from Mt. Popa and passes through lower Chindwin area where the volcanics are hosted to the porphyry copper deposits at the Sabe Taung, Kyesin Taung, & Lepadaung Taung, Monywa.

Potential area



Copper district geology

Monywa Copper Mine
(open-pit mine)

Cathode Copper from Monywa

DISTRIBUTION OF GOLD- PLATINUM DEPOSITS

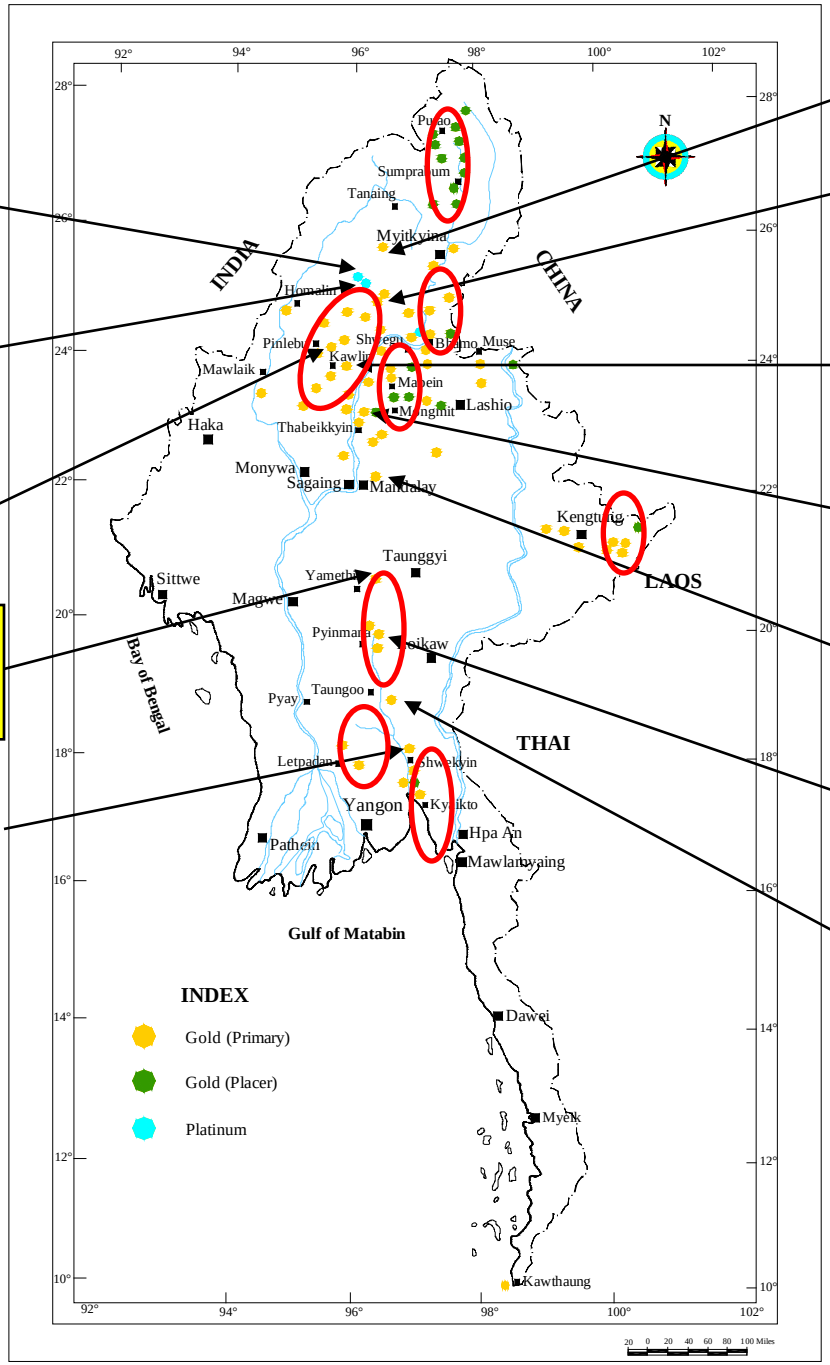
Shadusuik (Kachin)
Pt + Pd - 0.01 gm/t
1 million (Possible)

Ngagyan (Kachin)
Pt + Pd - 0.53%
21 million (Possible)

Shangalon (Sagaing)
Au - 1.4-12 ppm
0.02 million (Possible)

Moehti Taung (Mandalay)
Au - 15- 27 ppm
0.06 million (Probable)

Shwegyin (Bago)
Au - 0.1-0.35 gm/t
1.2 million Cu.yd. (Probable)



Wakan- Tanaing (Kachin)
Au - 0.04 gm/t
0.023 million Cu. Yd (Possible)

Namma- Kangon (Kachin)
Au - 0.13 gm/t
1.05 million Cu. Yd(Possible)

Banbwegon (Sagaing)
Au - 3 ppm
6 million (Probable)

Kwinthonse (Mandalay)
Au - 2-4 ppm
1.4 million (Probable)

Phayaungtaung (Mandalay)
Au - 4 ppm
3.7 million (Probable)

Pyinmana (Mandalay)
Au - 2 ppm
0.9 million (Possible)

Taunggu (Bago)
Au - 0.2-0.5 gm/t
0.2 million (Possible)

Gold occurrences = 341

Potential = 66 million tons

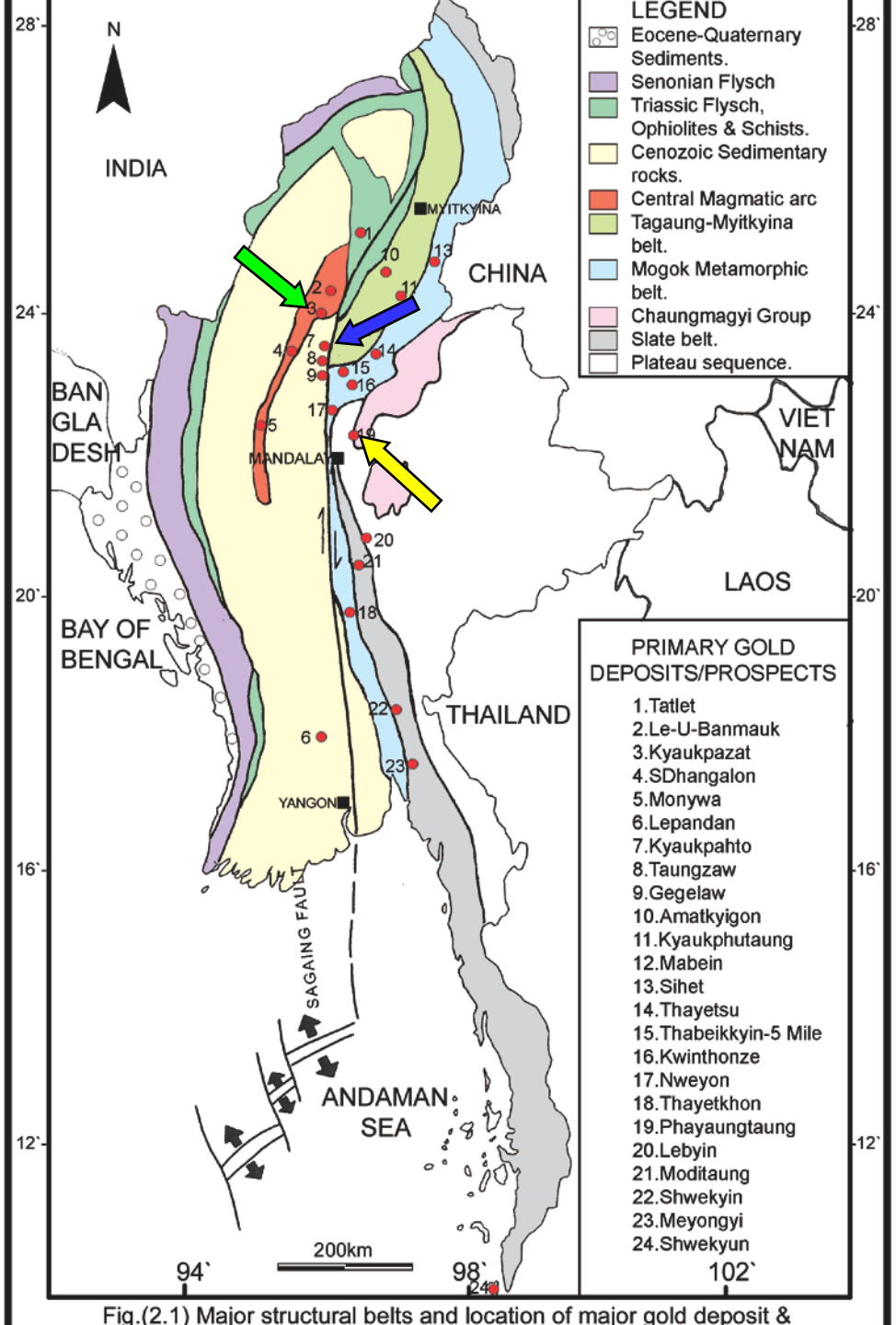


Fig.(2.1) Major structural belts and location of major gold deposit &

PRIMARY GOLD DEPOSITS/OCCURRENCES IN MYANMAR

(1) Mesothermal gold-quartz lode, porphyry style Cu-Au & its related Epithermal Au along the central magmatic arc.

(2) Sediment-hosted epithermal Au mineralization along the Sagaing fault zone.

(3) Mesothermal and epithermal gold mineralization in Tagaung Myitkyina belt

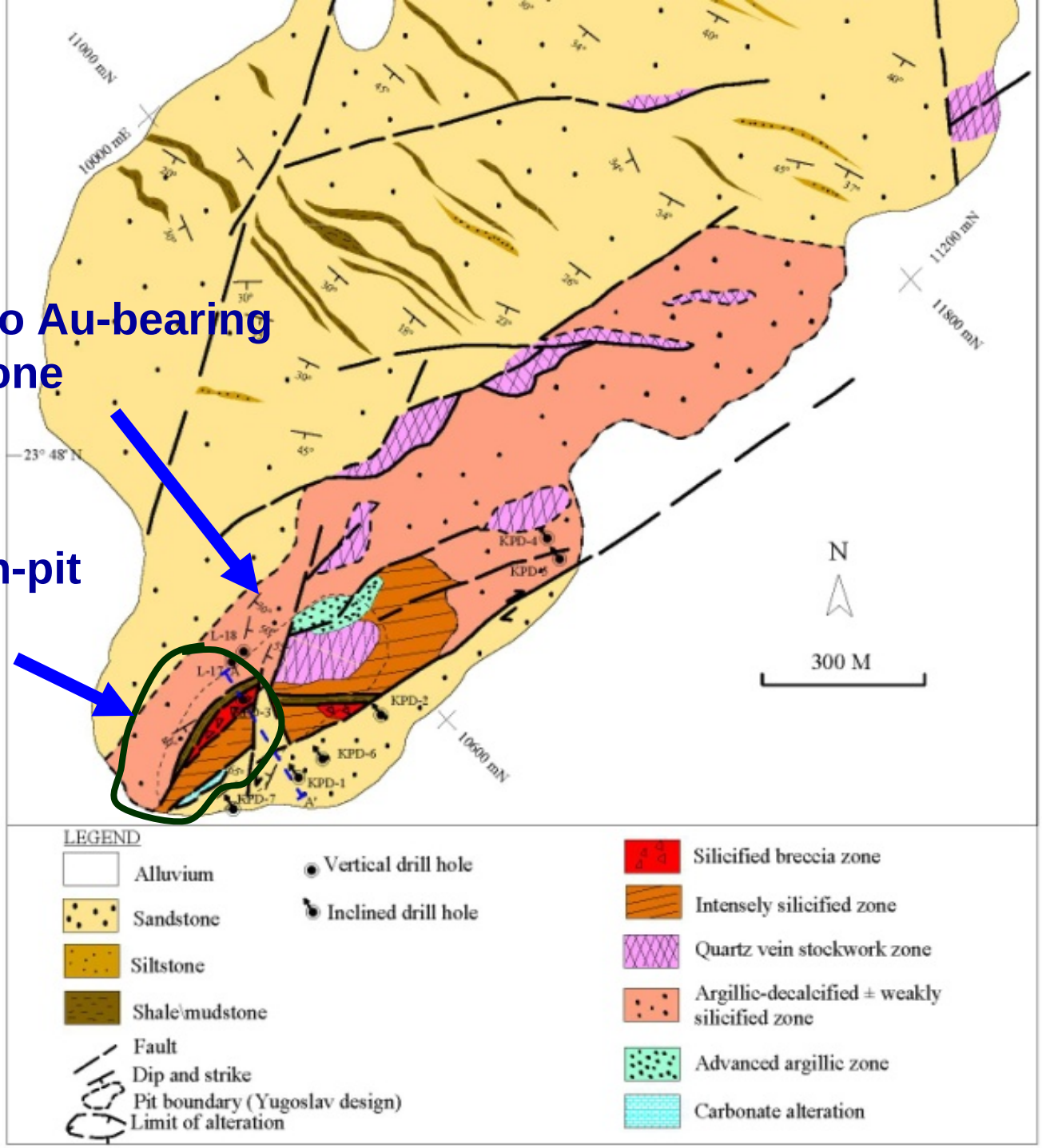
(4) Au(Cu) skarn & Mesothermal veins in marble, gneiss and granite within the Mogok metamorphic belt

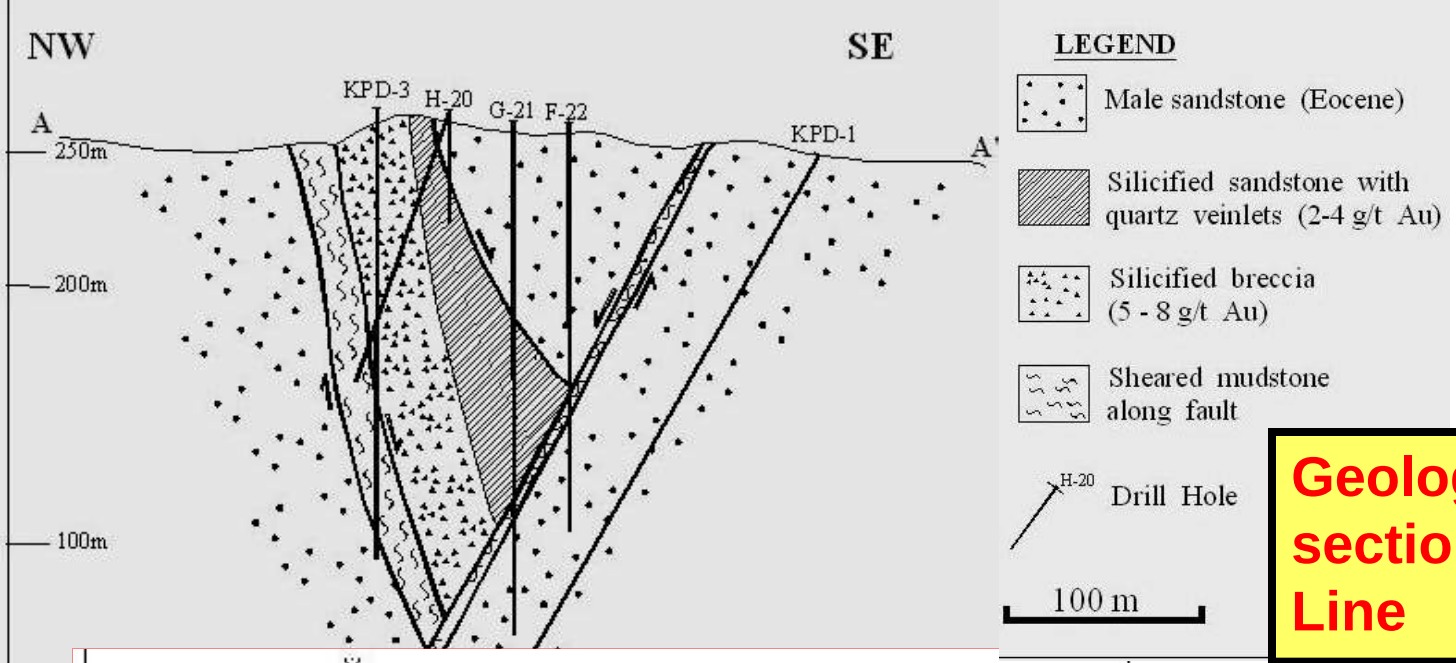
(5) Slate belt style Mesothermal gold-quartz veins in Chaung Magyi & Mergui Groups.

PRESENT SITUATION OF THE KYAUKPAHTO GOLD MINE, LOOKING SOUTH

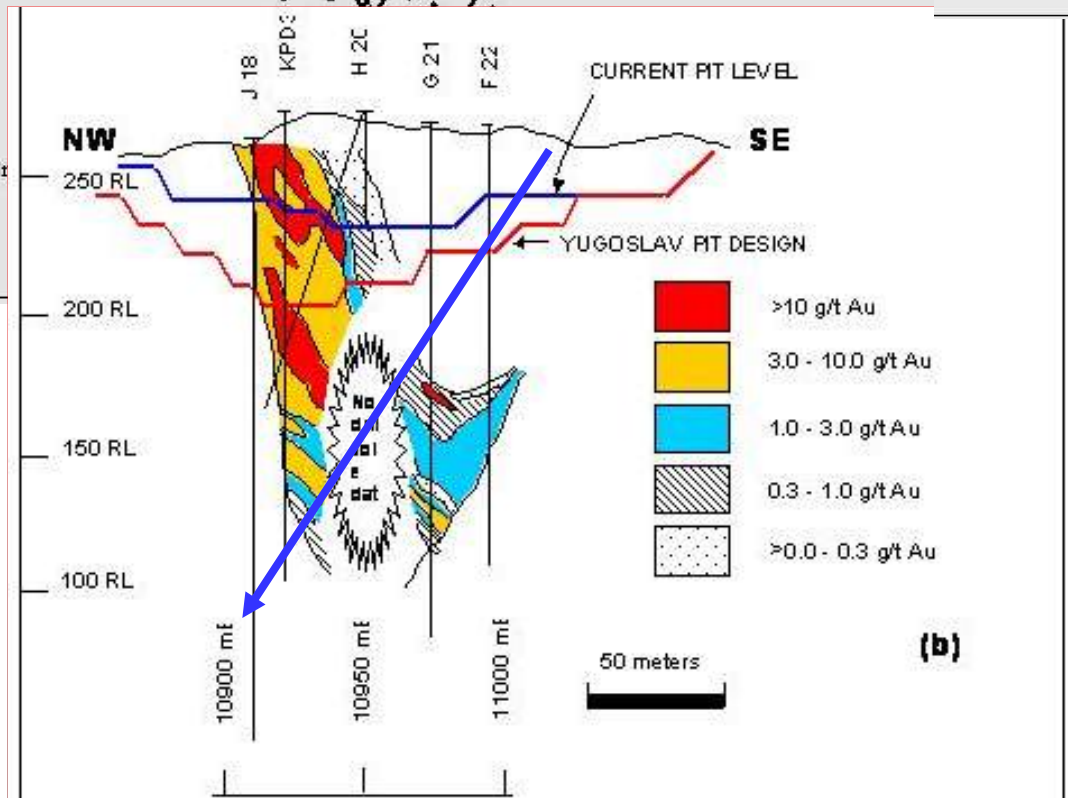
Kyaukpahto Au-bearing silicified zone

Present open-pit mining site



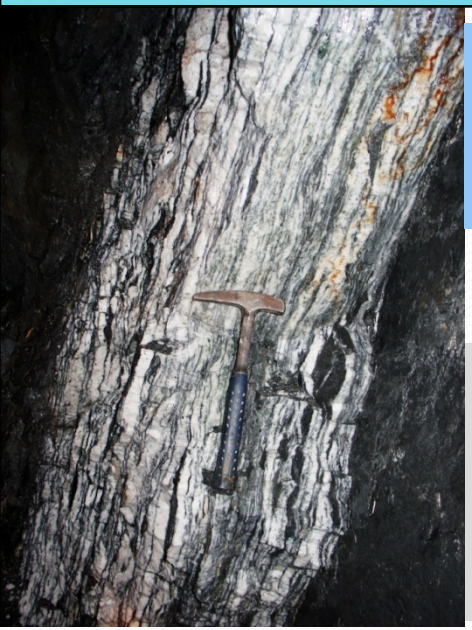


Geologic cross-section, 10375 mN Line



Gold distribution, 10375 mN Line

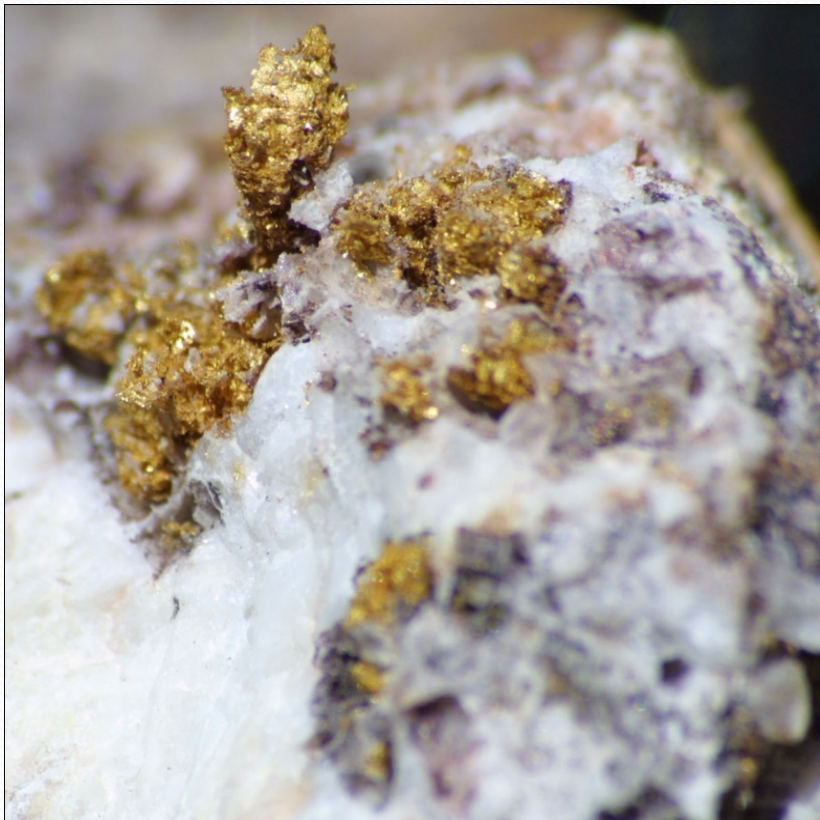
Moditaung gold mine

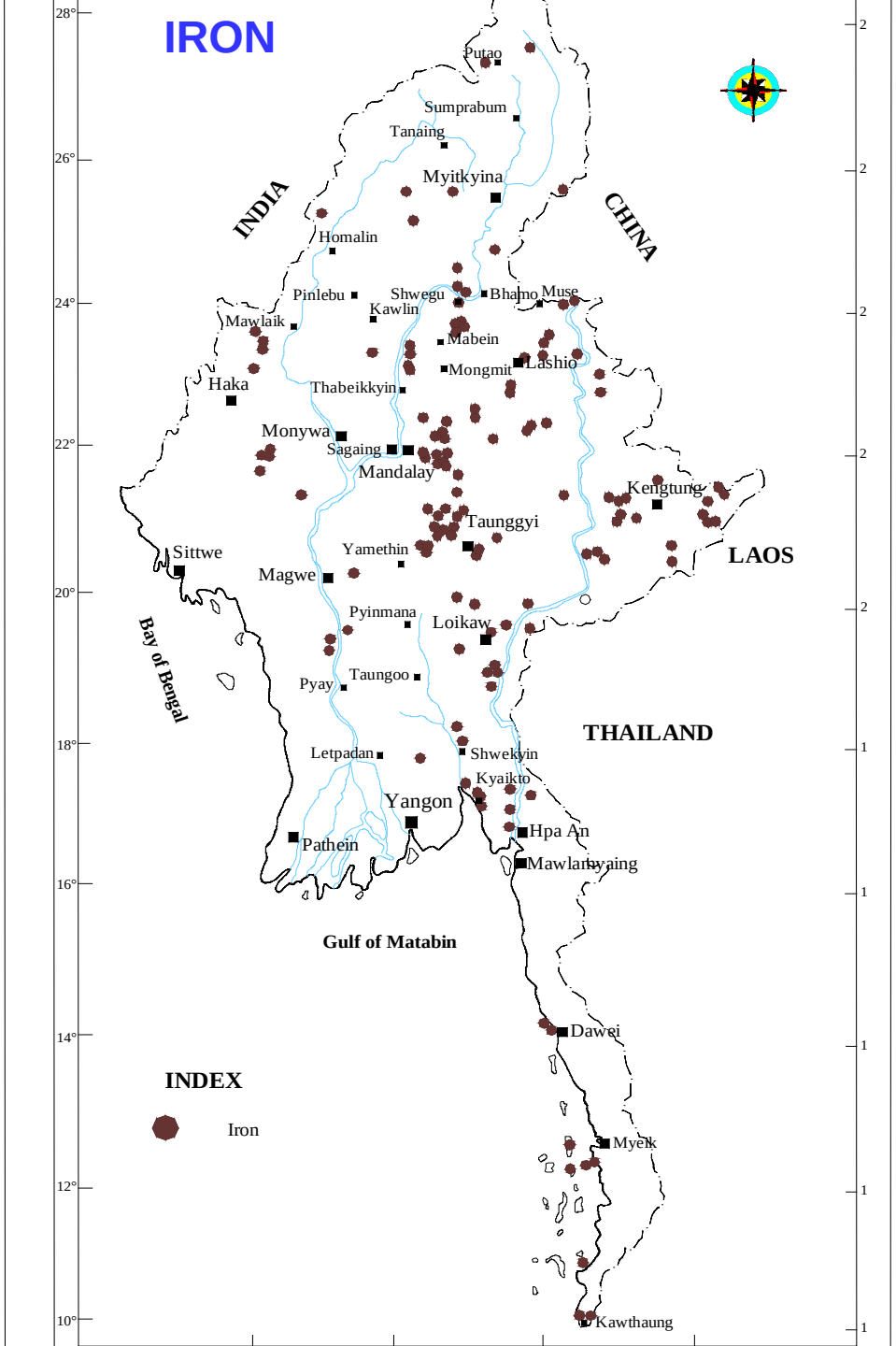


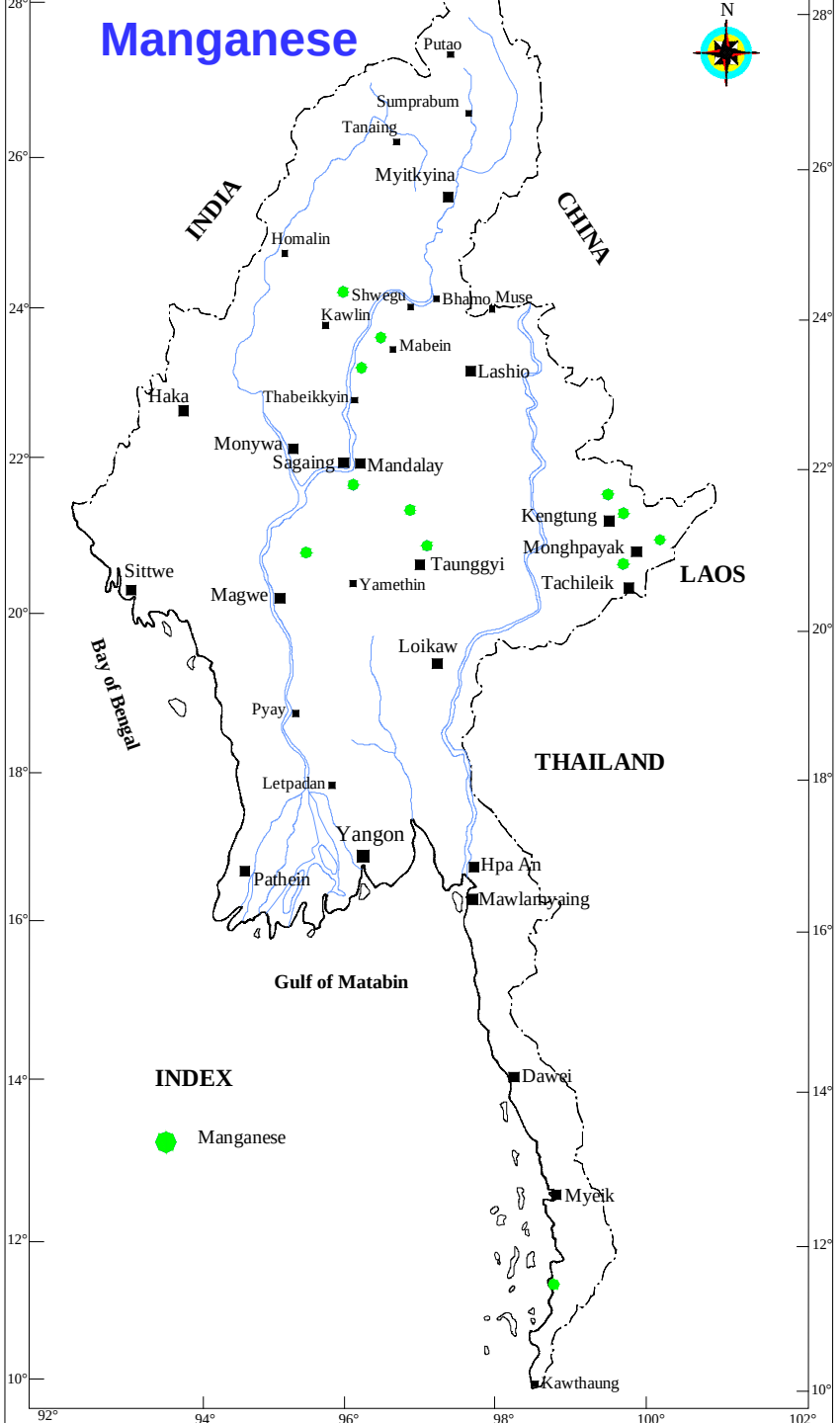
laminated book & ribbon vein. 77cm@122 to 575g/t below oxide zone. Htongyi Taung 950m level

Segment of Au-bearing quartz vein on 950m level at Htongyitaung, 40cm@11 g/t, looking SE.

- Coarse visible gold commonly present in veins assaying over 30g/t Au
- Gold not encapsulated in pyrite.
- Gold is frequently observed in hand specimens in both the oxide and sulphide zones.




IRON
Putao
Sumprabum
Tanaing
Myitkyina
INDIA
CHINA
Homalin
Pinlebu
Shwegu
Bhamo
Muse
Kawlin
Mawlaik
Mabein
Lashio
Mongmit
Haka
Thabeikkyin
Monywa
Sagaing
Mandalay
Kengtung
Taunggyi
Sittwe
Yamethin
LAOS
Magwe
Pyinmana
Loikaw
Bay of Bengal
Taungoo
Pyay
THAILAND
Letpadan
Shwekyin
Kyaikto
Yangon
Hpa An
Pathein
Mawlamyaing
Gulf of Matabin
Dawei
INDEX
Iron
Myeik
Kawthaung


Manganese
N
Putao
Sumprabum
Tanaing
Myitkyina
INDIA
CHINA
Homalin
Shwegu
Bhamo
Muse
Kawlin
Mabein
Lashio
Haka
Thabeikkyin
Monywa
Sagaing
Mandalay
Kengtung
Monghpayak
Taunggyi
Tachileik
LAOS
Sittwe
Yamethin
Magwe
Loikaw
Bay of Bengal
Pyay
THAILAND
Letpadan
Yangon
Hpa An
Pathein
Mawlamyaing
Gulf of Matabin
INDEX
Manganese
Dawei
Myeik
Kawthaung

DISTRIBUTION OF IRON DEPOSITS

Lamaung (Kachin)
Fe -51.54%
8.9 million (Probable)

Kathaing Taung (Kachin)
Fe -50.56 %
223 million (Probable)``

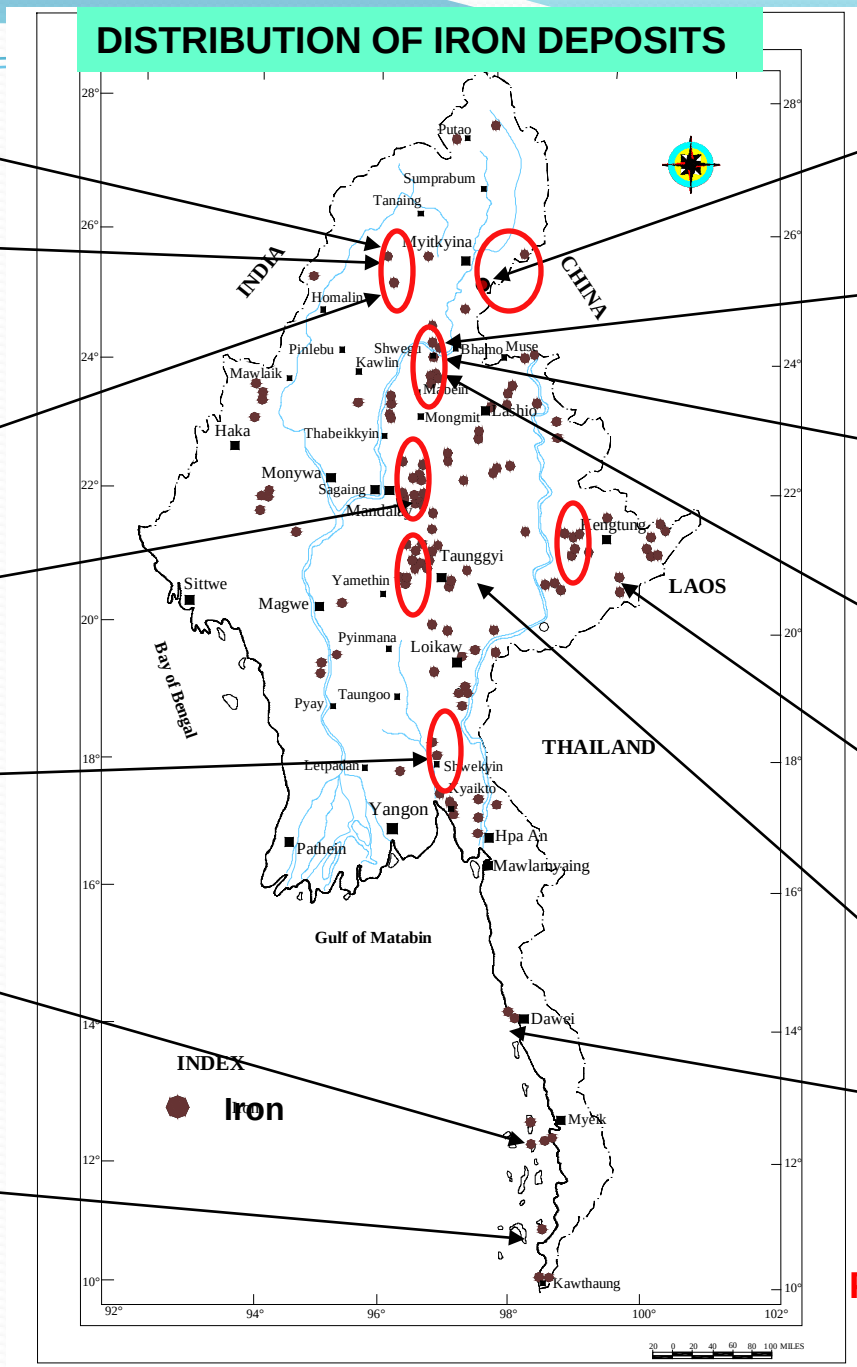
Sanleik (Kachin)
Lim.
10 million (Potential)

Kyatwinye, Inya (Mandalay)
Fe- 54 %
3.7+ 4.5 million (Probable)

Minlan Thanseik, ShweGyin (Bago)
Fe -28-56.7 %(Lim,)
75.53 million (Possible)

Kanmaw Island(Tanintharyi)
Fe -36 %
21.2 million (Probable)

Kho Island (Tanintharyi)
Fe -46.05 %
7.6 million (Probable)



Kantawyan(Kachin)
Fe -49-69%
2.354 million (Possible)

Taungkaton Taung (Kachin)
Fe -37- 45 %
2.3million (Potential)

TaungNyo Taung (Kachin)
Fe -40.67 %
18.9 million (Potential)

Haemaung (Kachin)
Fe -45.93 %
1.1 million (Potential)

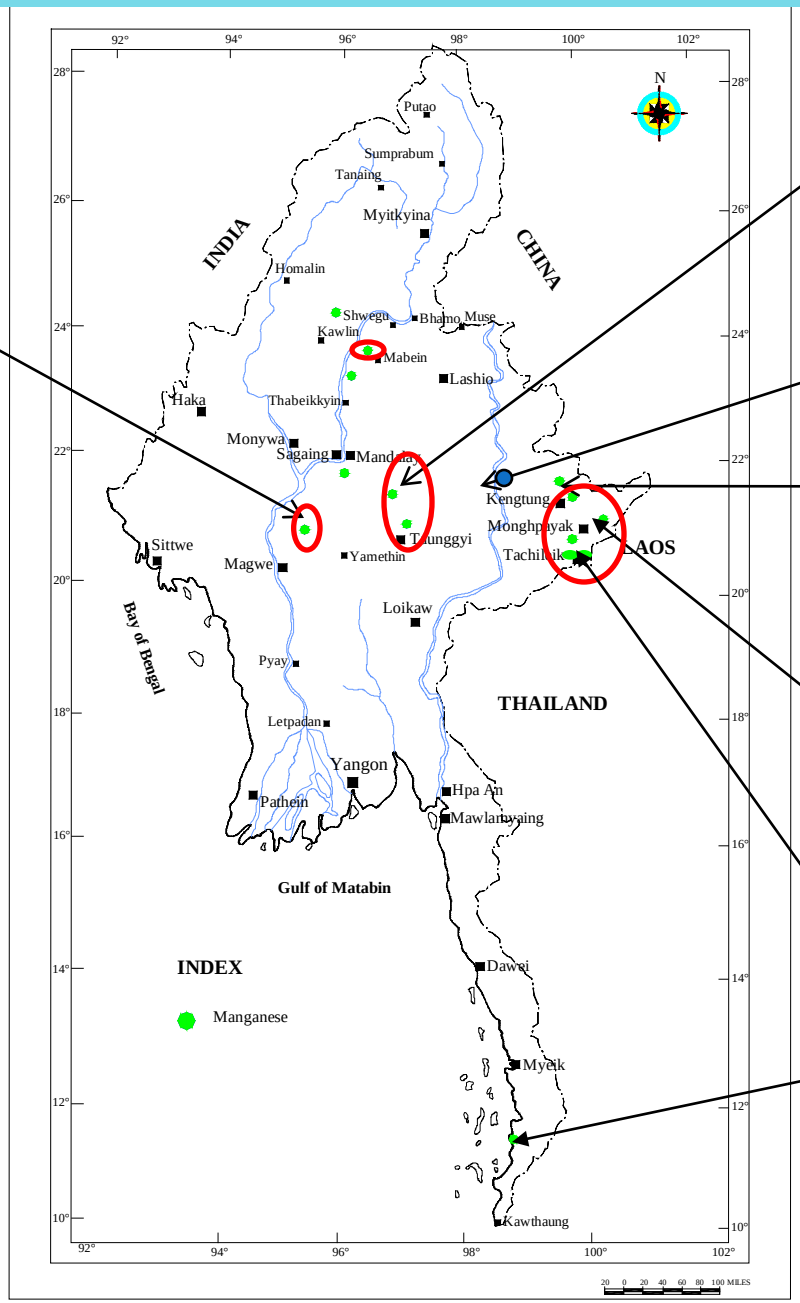
Mongkannwe (Shan East)
Fe -39- 66 %
21.5 million (Potential)

Pinpet (Shan South)
Fe -56.4 %(He,Lim)
80 million (Probable)

Maputae Island (Tanintharyi)
Fe -42 %
1 million (Probable)

Iron Occurrences = 393
Potential = 495 million tons

DISTRIBUTION OF MANGANESE DEPOSITS



Kyaukpadaung (Mandalay)

Monpyin (Shan South)

Tar Pin (Shan East)
Mn - 6.6%
0.65 million (Possible)

Wansaw -Wanpaing (Shan East)
Mn - 12.53%
4.95 million (Possible)

Areye (Shan East)
Mn - 25%
1 million (Possible)

Wansalot (Shan East)
Mn - 14%
0.135 million (Possible)

Powel Island(Tanintharyi)
Mn - 27%
2.8 million (Probable)

Manganese Occurrences= 52

Potential = 9 million tons

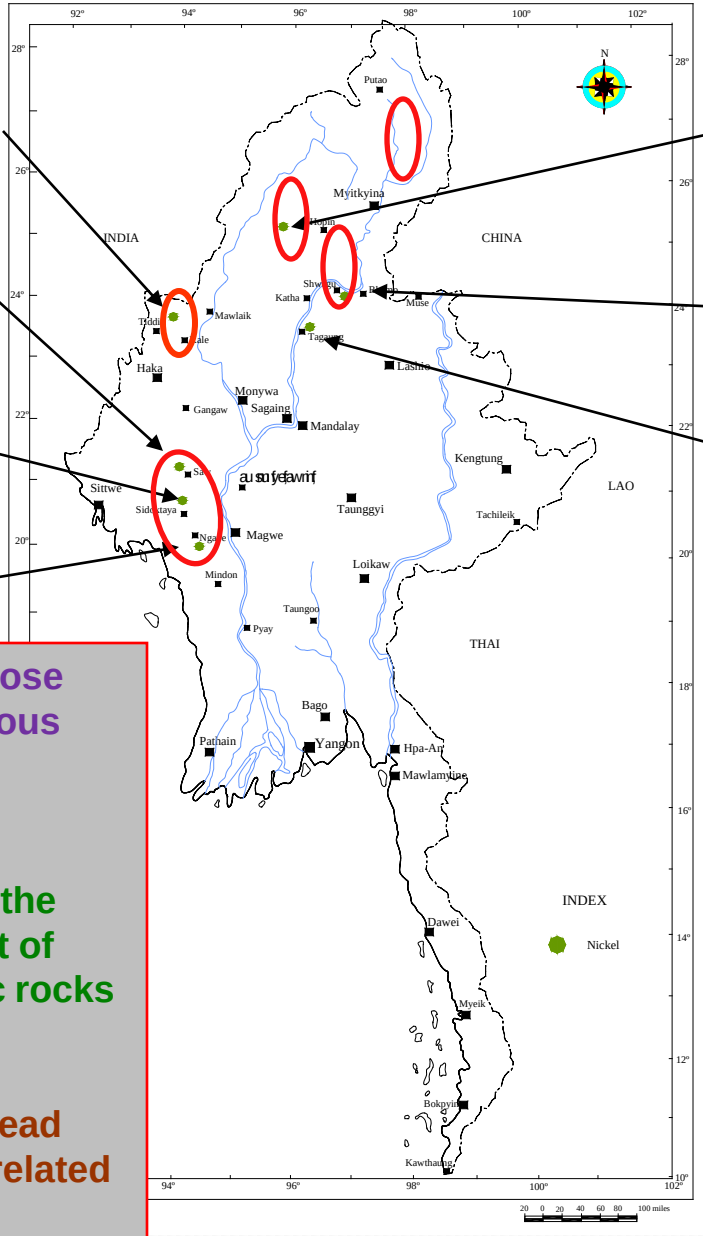
DISTRIBUTION OF NICKEL DEPOSITS

MWETAUNG
Ni- 1.19%
110 mt (Probable)

MAUNGDAW-NANMADAW
Ni- 0.41%
0.49 mt (Possible)

MINDINKYIN
Ni- 0.45%
0.02 mt (Possible)

UKINTAUNG,HKAKYINTAUNG
Ni- 0.4%
0.046 mt (Possible)



INDAWGYI
Ni- 0.41%
5.0 mt (Possible)

TAUNGGADON
Ni- 0.67%
0.028 mt Possible)

TAGAUNGTAUNG
Ni- 2.06%
40 mt (Possible)

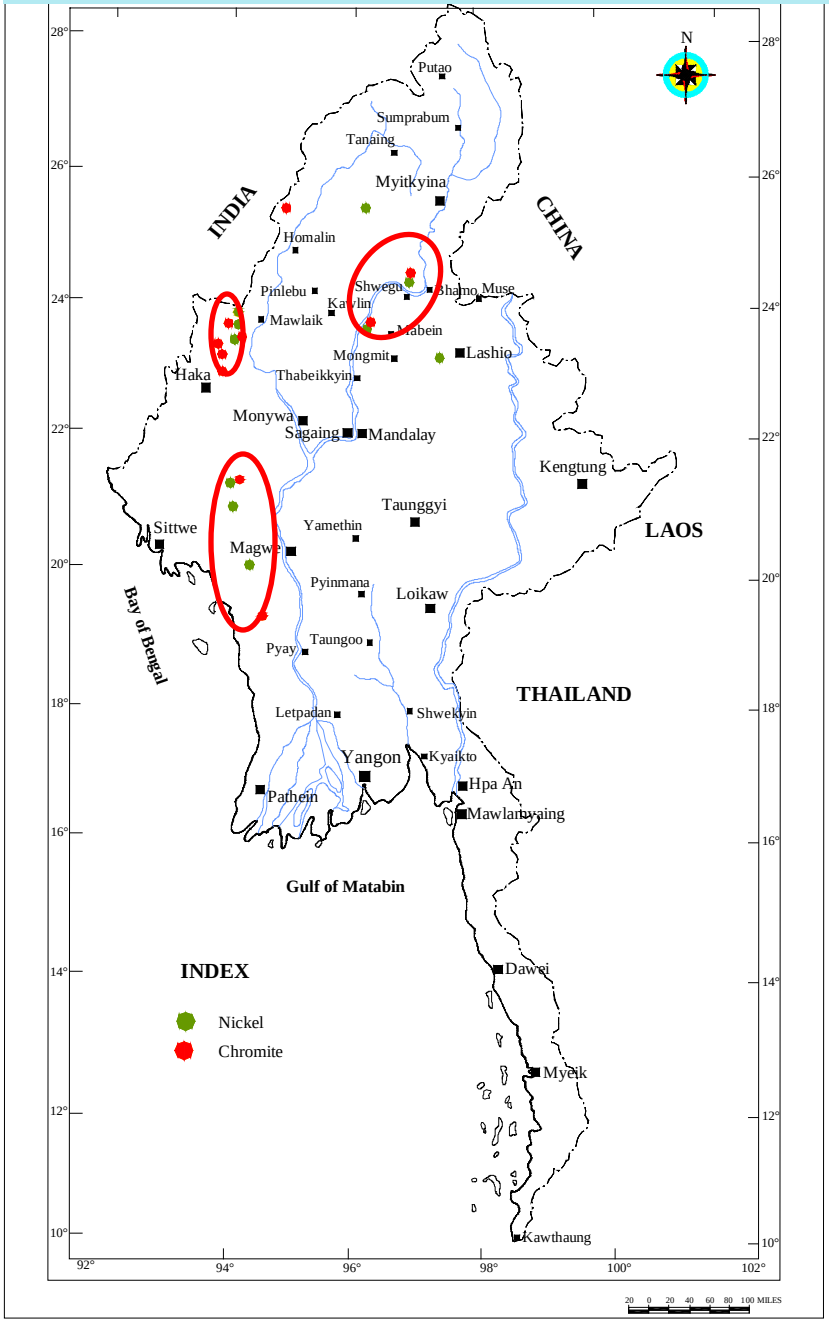
Ni-Cr mineralization occurs in close association with ultramafic igneous rocks emplaced during LateCretaceous-Early Eocene.

At Mwetaung & Tagaung Taung, the deposits have formed as a result of tropical weathering of ultramafic rocks (Ni laterite deposits)

Cromite deposits are of widespread occurrences in Myanmar being related to N-S trending ophiolite lines.

Nickel Occurrences =14

DISTRIBUTION OF CHROMITE OCCURRENCES



Chromite Occurrences = 43

TAGAUNGTAUNG
Ni- 2.06%
40 mt (Possible)

Resource estimation- 40 mt with ~ 2.0 % Ni

Antimony deposits

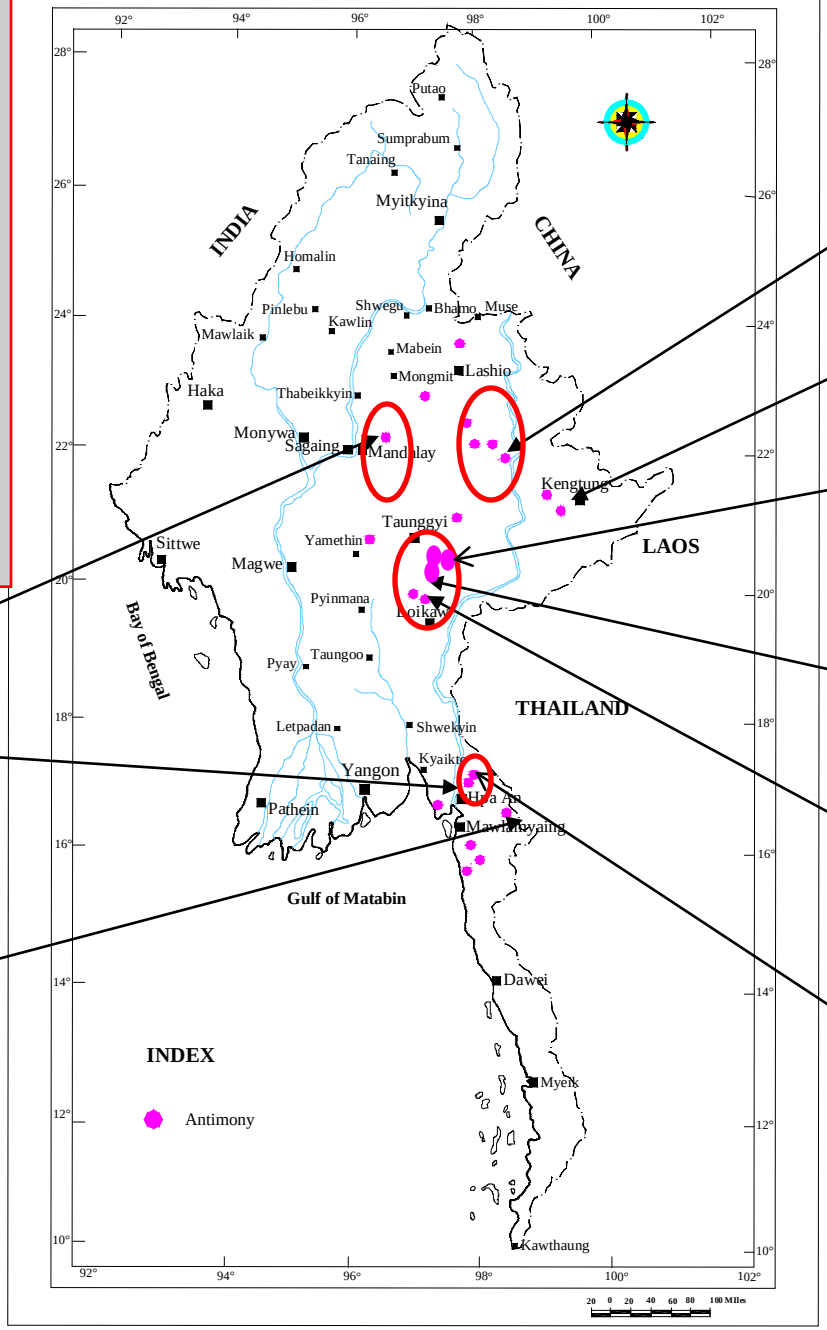
-More than 140 occurrences of stibnite and other sb-bearing minerals are known in Myanmar.

-The majority of antimony mineralization occurs in the late Paleozoic carbonates (Triassic to Permian in age) & also in the late Pleozoic clastic sediments of the Mergui series.

-generally found in veins or lenses, or both.

-So far, the best known antimony deposit s are at Thabyu, Kayin State, near Thai Border. The ore is reported to be of high grade.

DISTRIBUTION OF ANTIMONY DEPOSITS



Lebyin,Mandalay

Kadaik, Mon

Thabyu,Mon

Nahok,Shan

Mong Inn,Shan

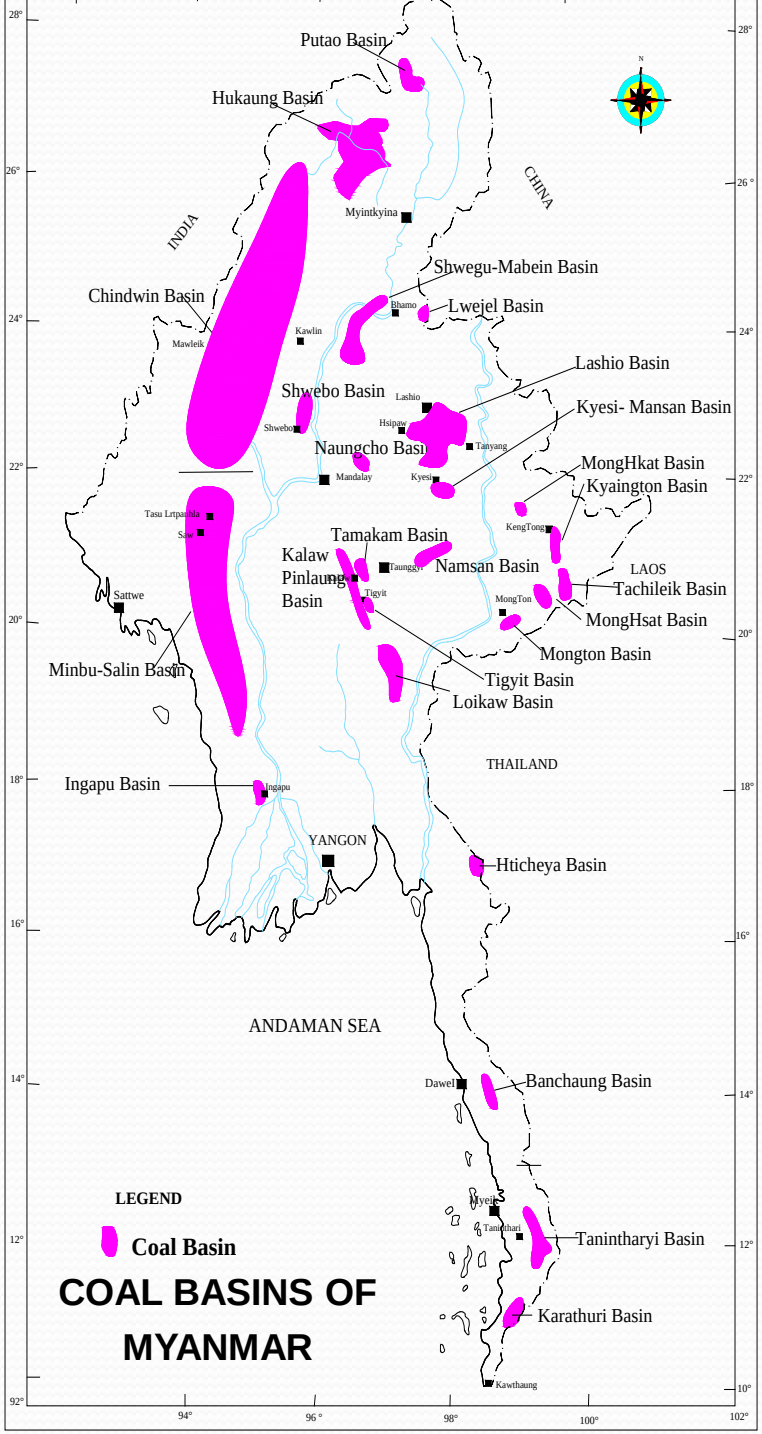
Liharmyar, Hopone

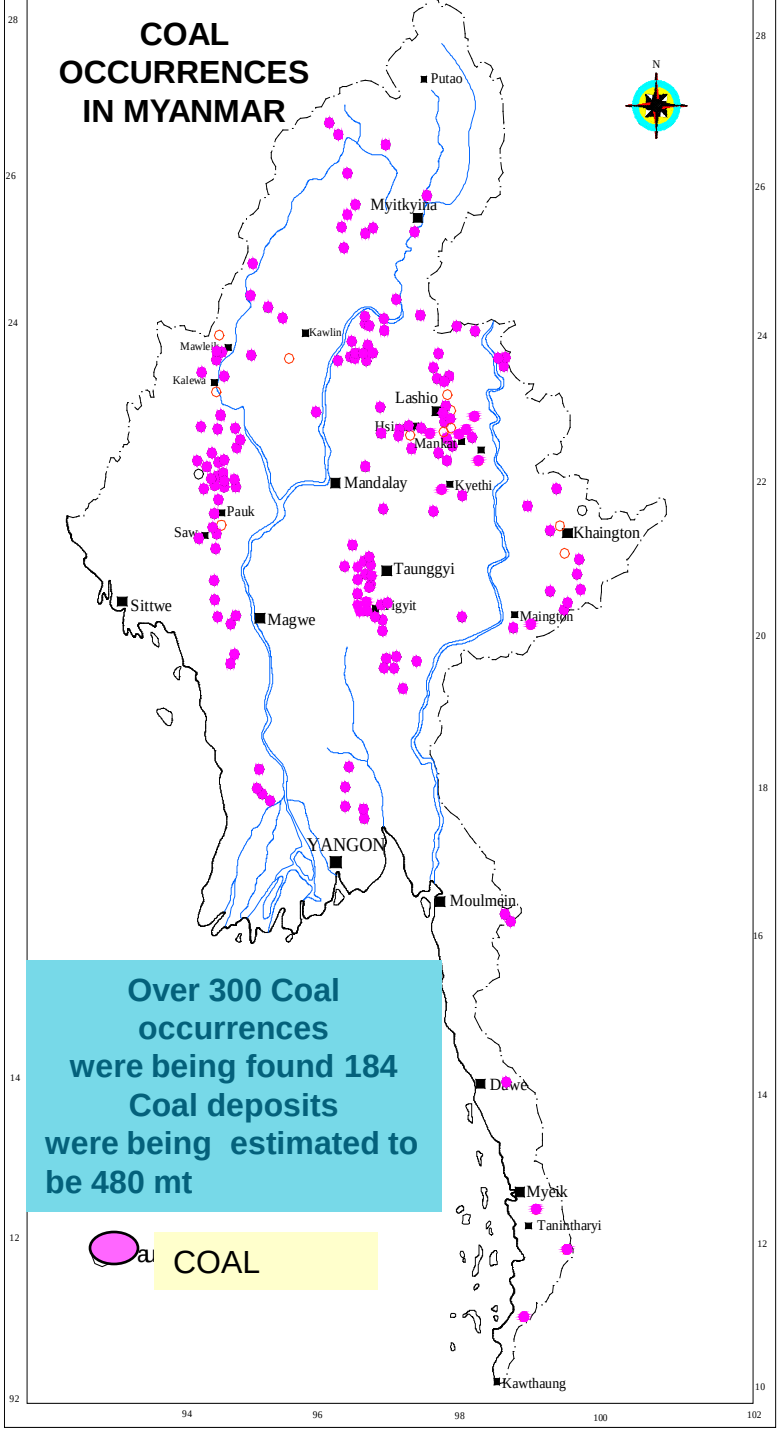
Peinchit,Kayah

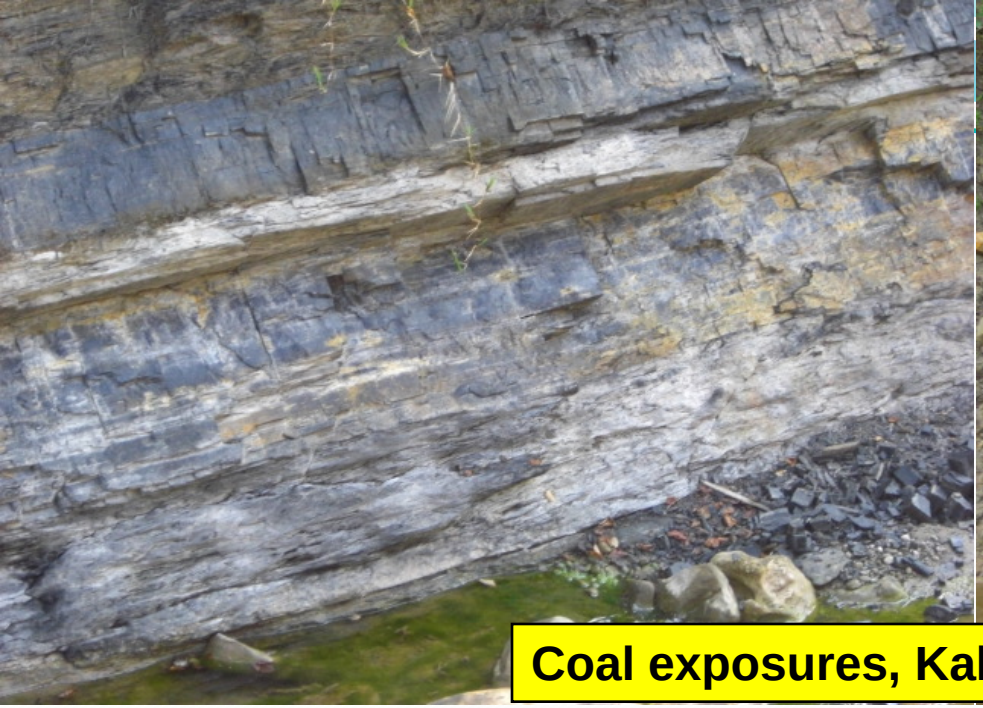
Konsut,Kayah

Laga,Kayin

Antimony mine, Hopone area, Shan State


Putao Basin
Hukaung Basin
Myintkyina
INDIA
CHINA
Shwegu-Mabein Basin
Chindwin Basin
Bhamo
Lwejel Basin
Kawlin
Mawleik
Lashio Basin
Shwebo Basin
Lashio
Kyesi- Mansan Basin
Hsipaw
Shwebo
Tanyang
Naungcho Basin
Mandalay
Kyesi
MongHkat Basin
Kyaington Basin
Tasu Lrtpanhla
Saw
KengTong
Tamakam Basin
Kalaw
Pinlaung
Basin
Taunggyi
Namsan Basin
LAOS
Tachileik Basin
Tigyit
MongTon
MongHsat Basin
Sattwe
Mongton Basin
Minbu-Salin Basin
Tigyit Basin
Loikaw Basin
THAILAND
Ingapu Basin
Ingapu
YANGON
Hticheya Basin
ANDAMAN SEA
Dawei
Banchaung Basin
Myeik
Tanintharyi
Tanintharyi Basin
Karathuri Basin
Kawthaung
LEGEND
Coal Basin
COAL BASINS OF MYANMAR
28°
26°
24°
22°
20°
18°
16°
14°
12°
10°
92°
94°
96°
98°
100°
102°


COAL OCCURRENCES IN MYANMAR
Putao
Myitkyina
Kawlin
Mawleik
Kalewa
Lashio
Hsipaw
Mandalay
Kyethi
Pauk
Saw
Khaington
Taunggyi
Sittwe
Magwe
Maington
YANGON
Moulmein
Dawei
Myeik
Tanintharyi
Kawthaung
Over 300 Coal occurrences were being found 184 Coal deposits were being estimated to be 480 mt
COAL
28
26
24
22
20
18
16
14
12
10
92
94
96
98
100
102

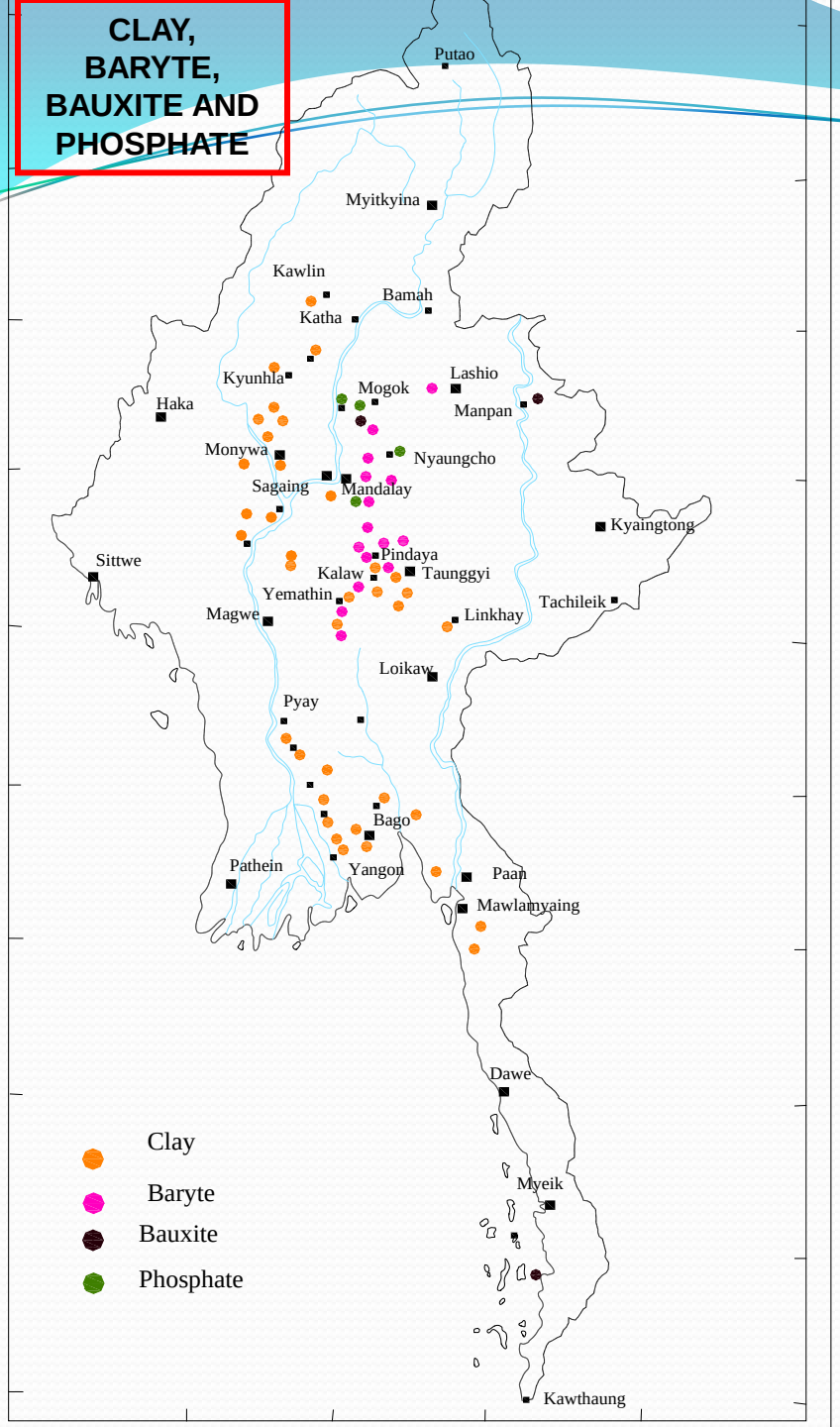


Coal exposures, Kalewa-Mawleik area

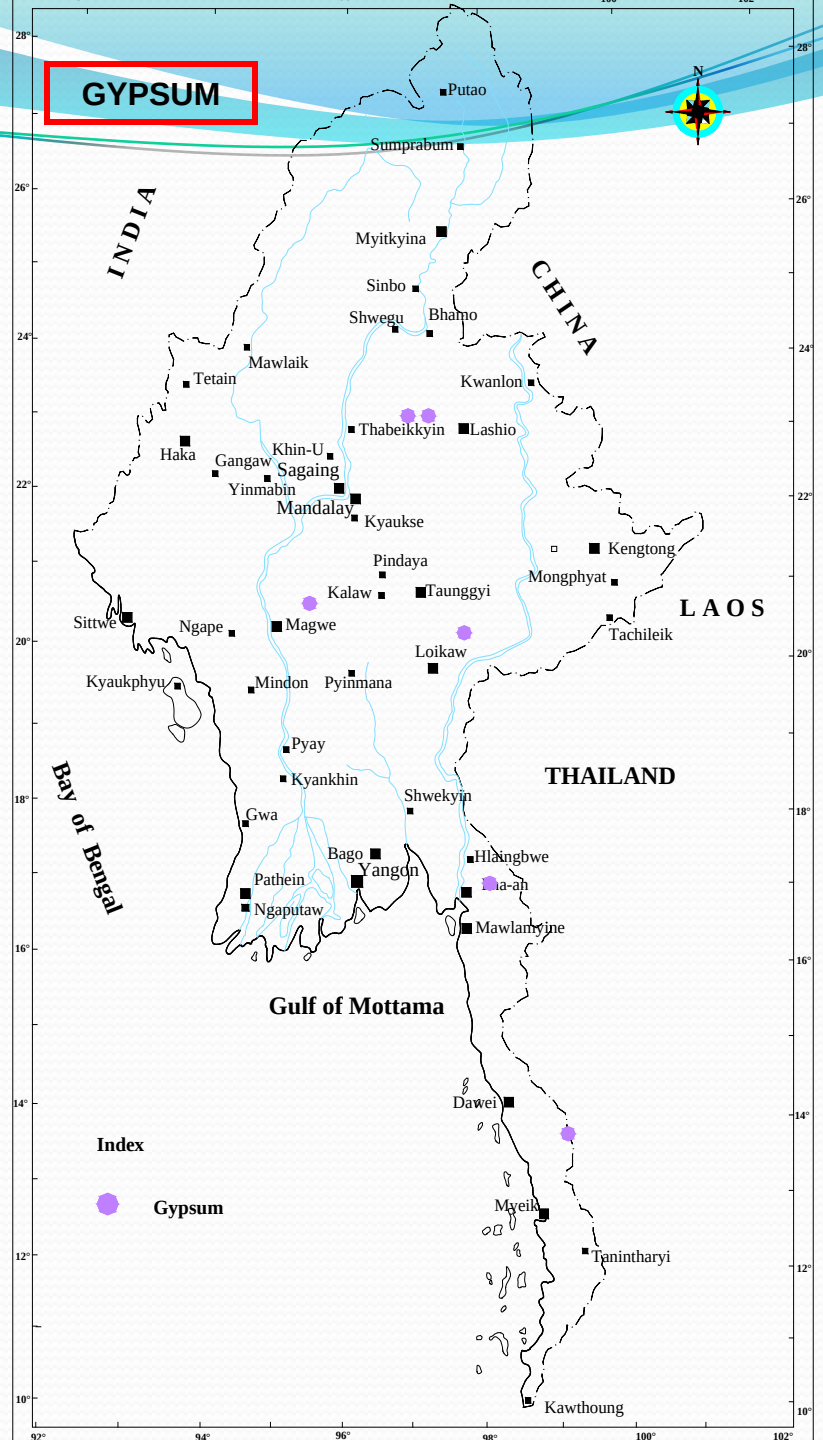
Kalaywa Coal Mine

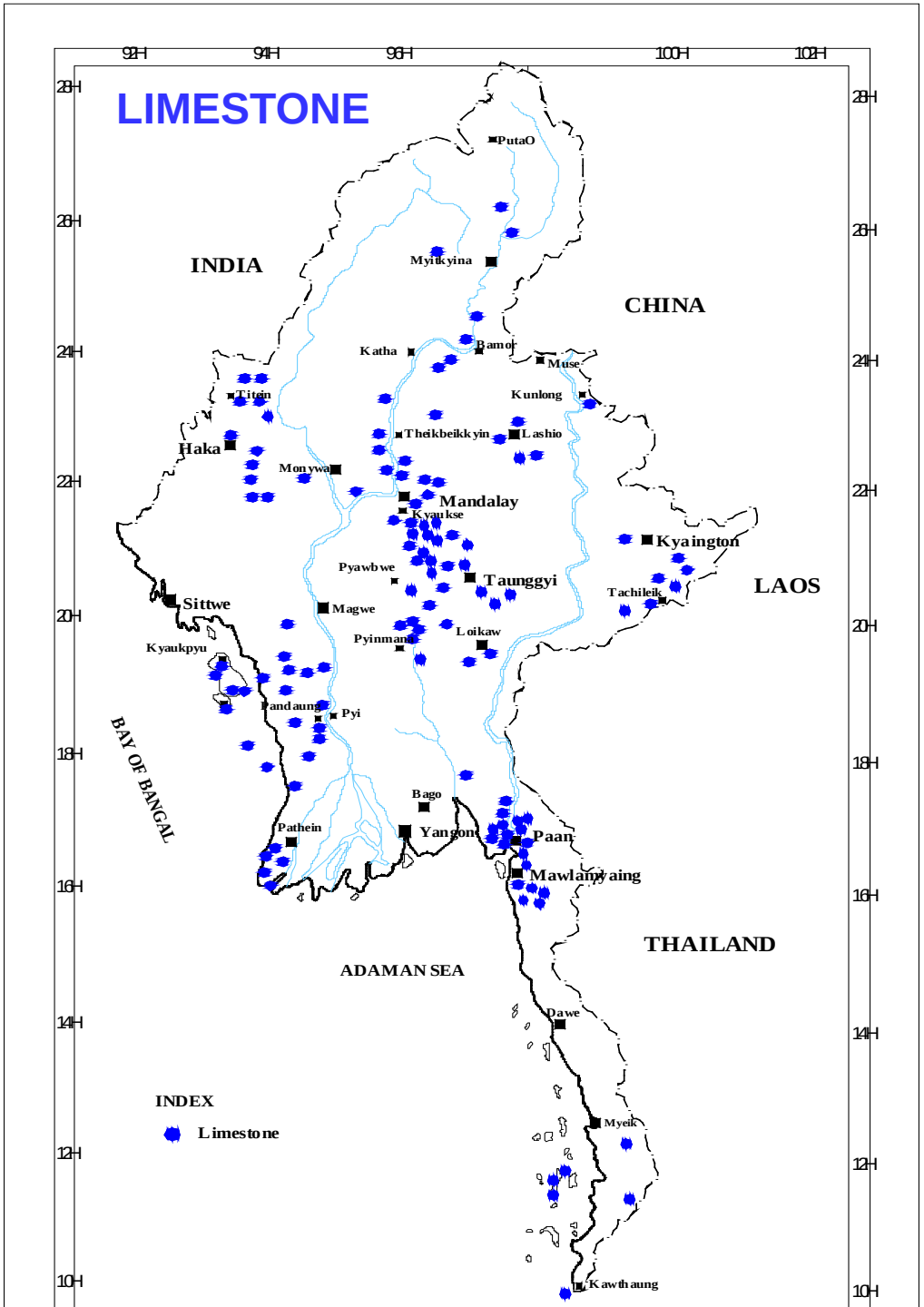
Namma Coal Mine

CLAY, BARYTE, BAUXITE AND PHOSPHATE



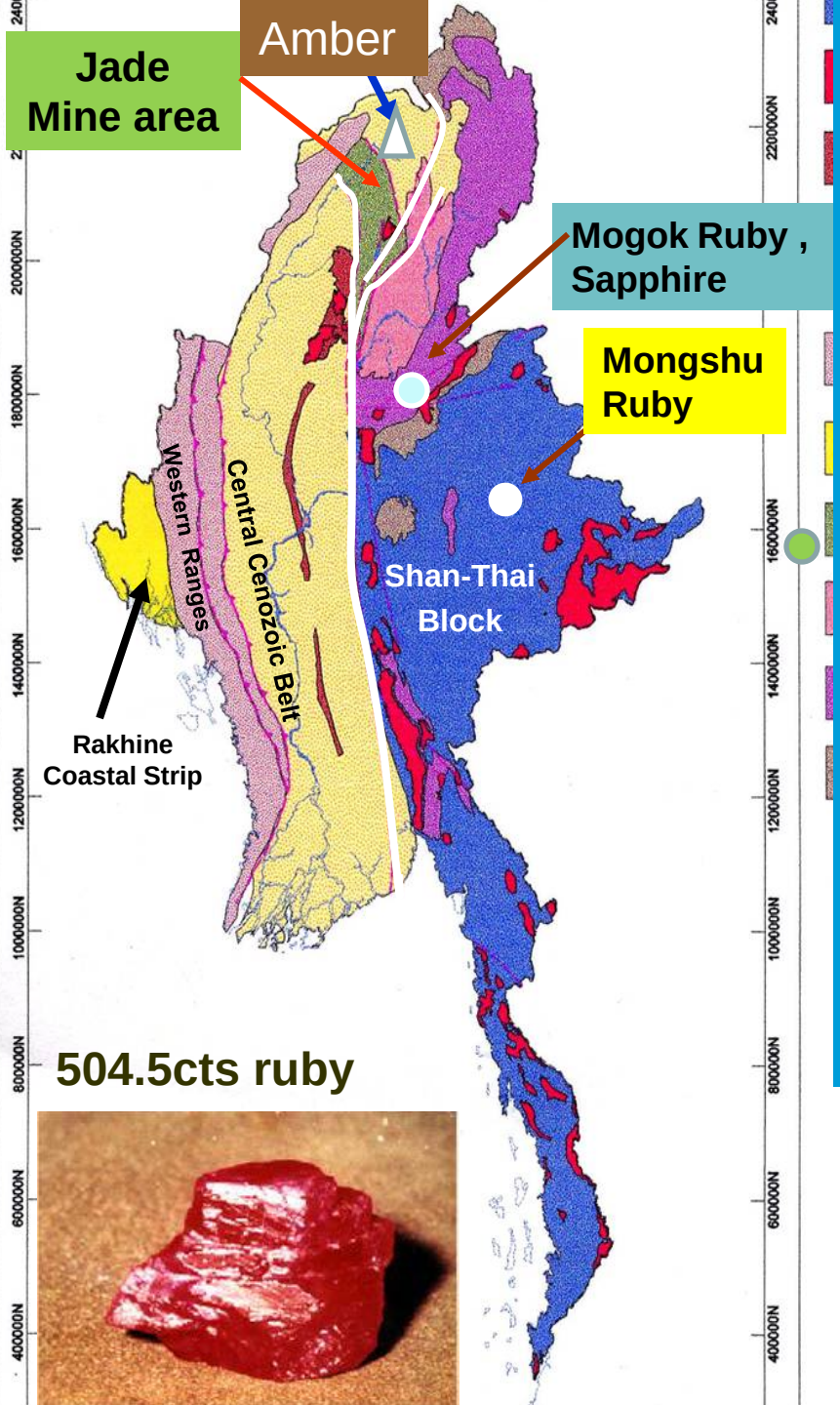
GYPSUM





Lime stone deposits = 452

Gemstones of Myanmar



Mogok gemstone tract : Ruby, sapphire and spinel occur as primary minerals in marble, calc-silicates and as well as obtained from placers in eluvial and alluvial sediments.

Jade mine area: Jadeite-albite dykes and veins intruded into serpentinite bodies at the Tawmaw- Lonkin area,

Burmese amber (Burmite): The major occurrences are located in the Hukwng valley -

-other ruby occurrences are Nayaseik

and Pyinlon.


Jade mine site, Phakant

Jade mine (Aerial View)

RUBY from Mogok Gemstone Tract

&wemjyyGJwGif jyoxm;onhf rkdif;½SL;ausmufrsufrsm;

Sapphire from Mogok Gemstone Tract

Assorted Gemstones from Mogok Area

MINERAL OCCURRENCE IN MYANMAR

- Khanti Jade
- Lonkhin Jade
- Kathaingtaung Iron
- Indawgyi Platium / Gold
- Kyaukpahto Gold
- Shangalon Copper/Gold
- Mogok Gem
- Mwetaung Nickel/Chromite
- Kalewa Coal
- Tagaungtaung Nickel/Chromite
- Monywa Copper
- Sagaing Limestone
- Taungnima Limestone
- Tharzi Soda Ash.
- Kanpetlet Nickel/Chromite
- Thayetkhon Gold
- Pyinmana Tin/Limestone
- Kyauktalon Salt
- Sane/Lawetet Salt
- Kyaukyetain Limestone
- Myothaung Salt
- Thandawe Pearl
- Lemyatnha Copper
- Lepadan Gold
- Chaung Gwa Limestone
- Than Lyin Tin Refinary
- Thamehbyu Salt
- Kyauktan Salt
- Thingangalay Salt
- Htanpinchaung Salt
- Kyeikhami Salt
- Dawei Tin Up Grade Plant
- Laba Salt
- Mali - Kyun Pearl
- Pale - Kyun Pearl
- Kho - Kyun Iron

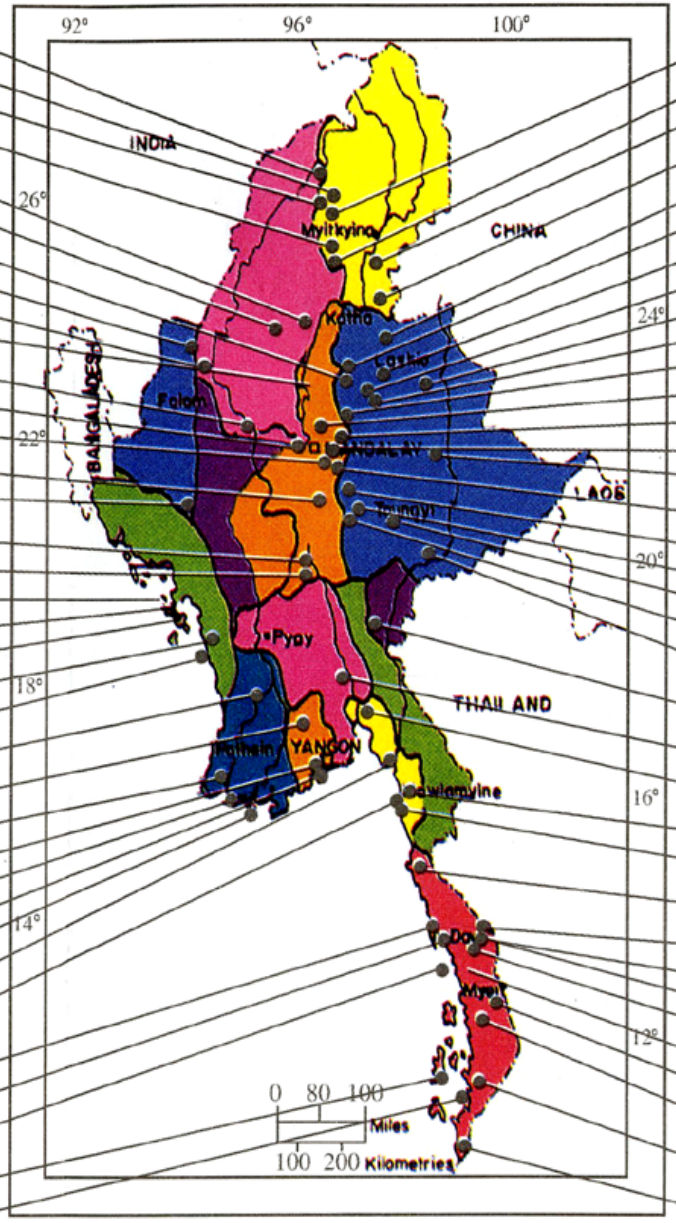


Fig.1

- Phakant Jade
- Namma - Kangon Gold
- Sinbo Copper
- Myothit Gold
- Pyinlong Gem
- Mongmeik Diamond
- Bawdwin Lead - Zinc-Silver
- Sanlaung Coal
- Nama Coal
- Hsipaw Gypsum
- Yadanatheingi Lead - Zinc - S
- Phayaungtaung Gole
- Pyin - Oo - Lwin Iron - Barite
- Kwenapha Limestone
- Mongshu Gem
- Kyaukse Copper/Limestone
- Bawsaing Lead - Zinc - Silver
- Heho Barite
- Pangpet Iron
- Lebyin Antimony
- Wansalaung Gem
- Mawchi Tin/Tungsten
- Shewgyin Gold
- Meyongyi - Meyongale Gold
- Natsan Antimony
- Panga Salt
- Kanbauk Tin
- Hermyingyi Tin/Tungsten
- Kyaykmedaung Tin
- Heinda Tin
- Pagayee Tin
- Nanthila Tin
- Theindaw Diamond/ Tin
- Tharabon Limestone
- Bokpyin Tin
- Maliwun Tin

Thank You