

MINING REPORT ON BRAZIL

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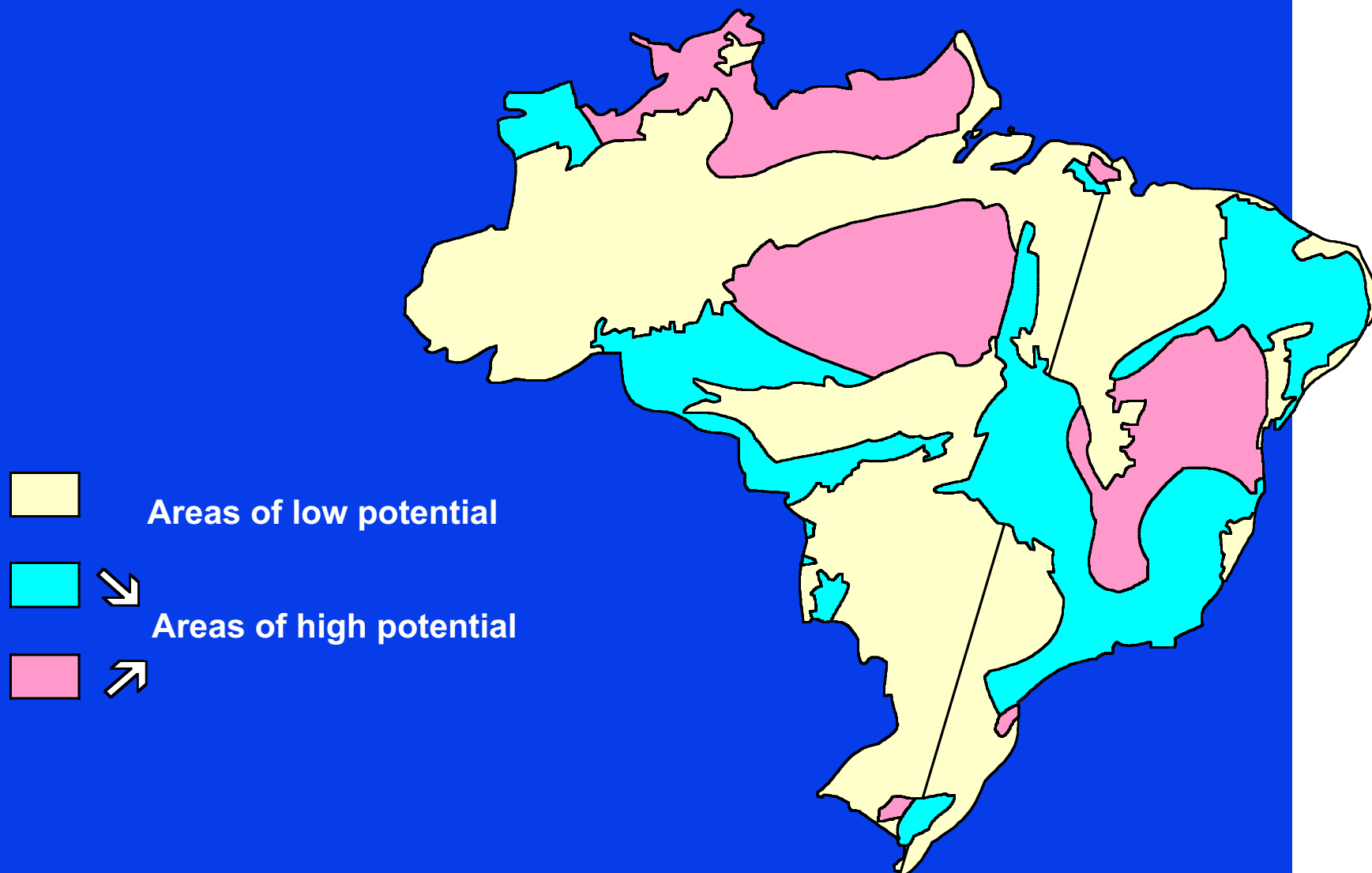
Abstract

The region in which coloured gems are produced, as well as the major geological features are shown in maps and tables for different kinds of gems: emerald, chrysoberyl, aquamarine, tourmalines, imperial topaz and amethyst.

Gems are still found at random in Brazil and its mining techniques are mostly very primitive. Only very few working mines make use of modern mining techniques.

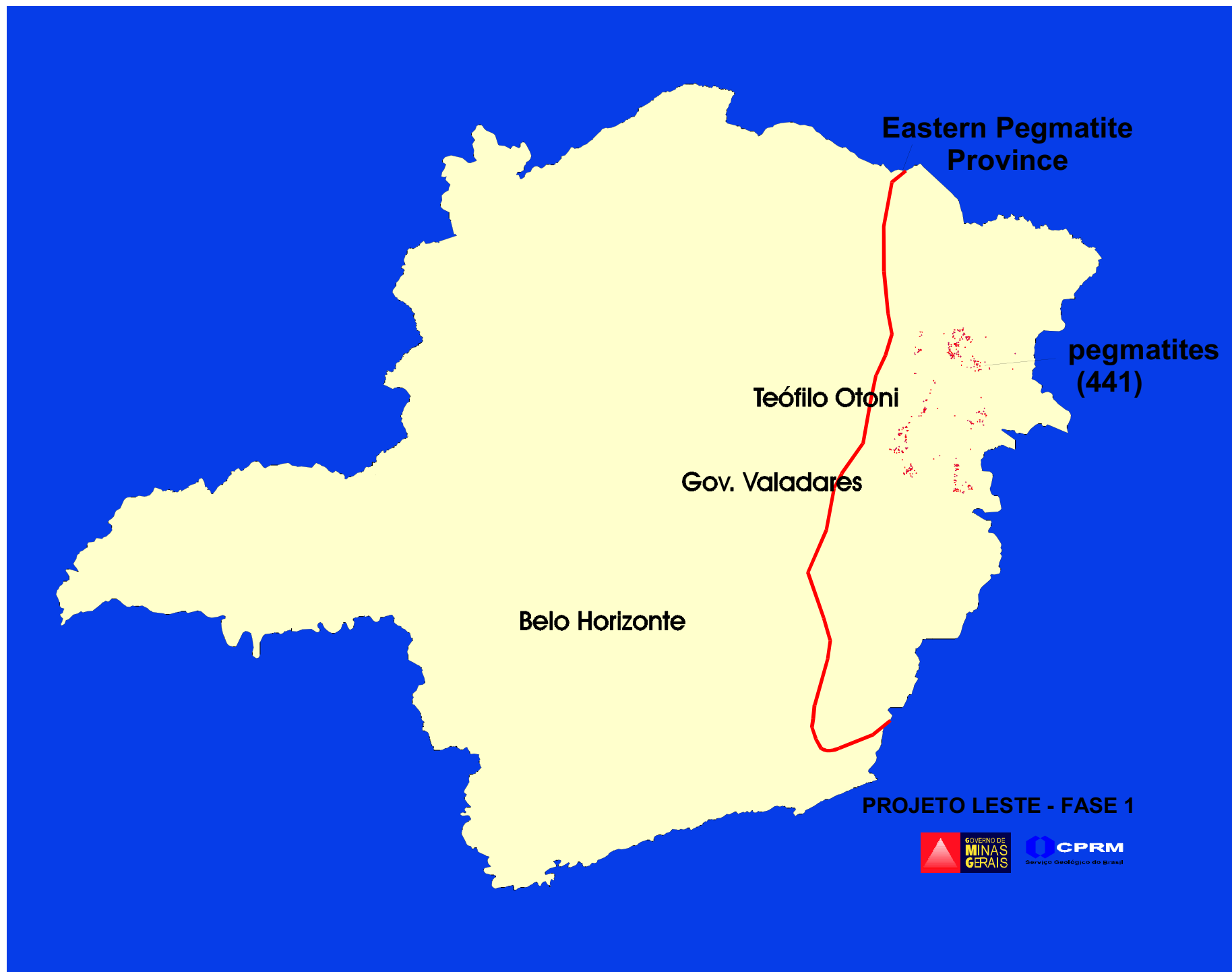
Brazil continues to have an immense gem potential. The country now offers a favorable atmosphere for the entry of efficient and well organized gem mining companies, due to recent deregulations by the government and the advances in geological and geophysical prospecting.

Regions with Potential for Gem Production in Brazil



Gem Potential in Brazil

- **40% of Brazilian territory has crystalline rocks which may have pegmatite deposits.**
- **There has been only limited research on gems in Brazil. The discovery of large deposits has almost always been accidental.**
- **The mining of pegmatite gems has been done with rudimentary techniques, with the deposits giving a low yield.**

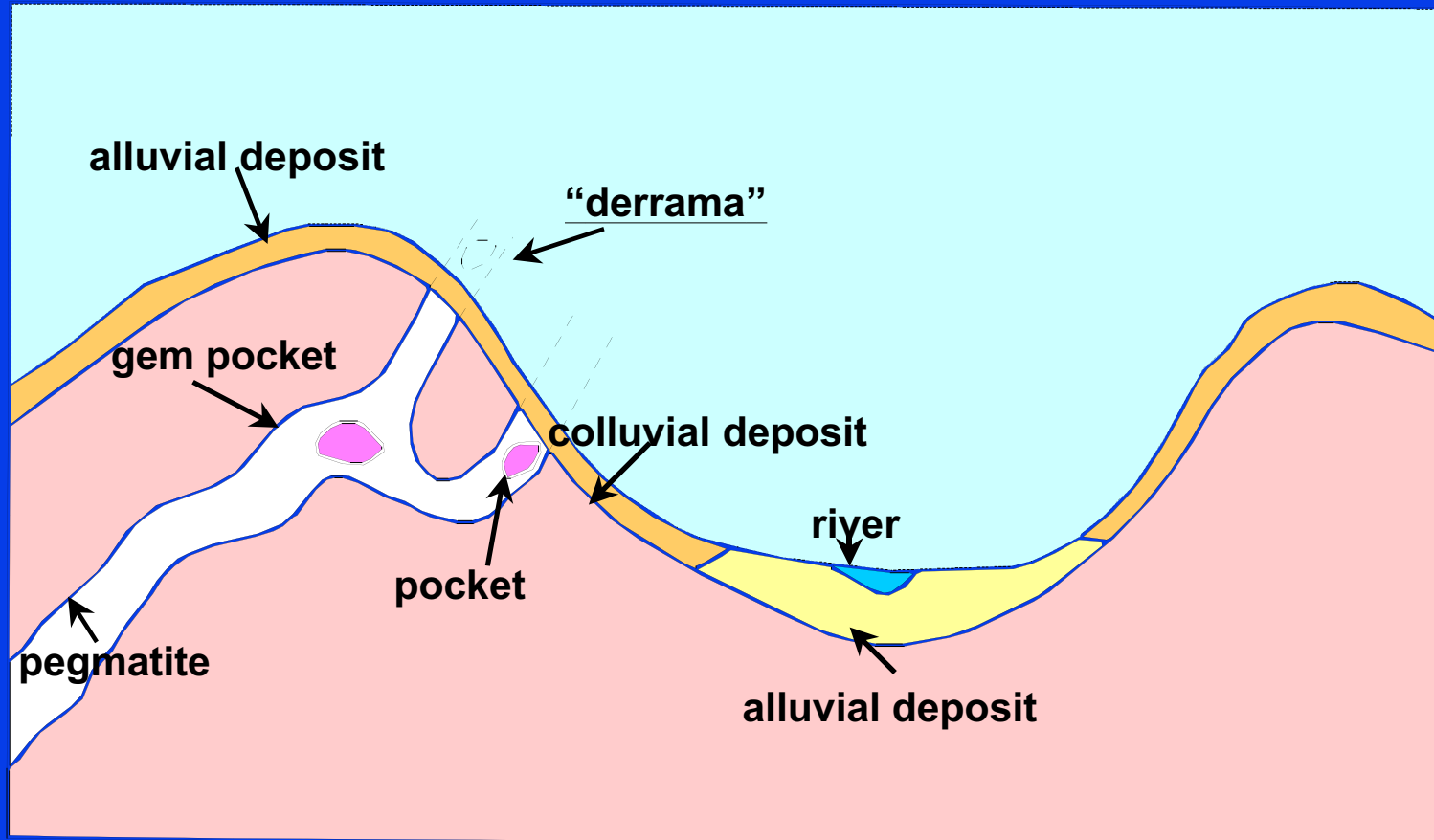


PROJETO LESTE - FASE 1



Production

Modes of Occurrence

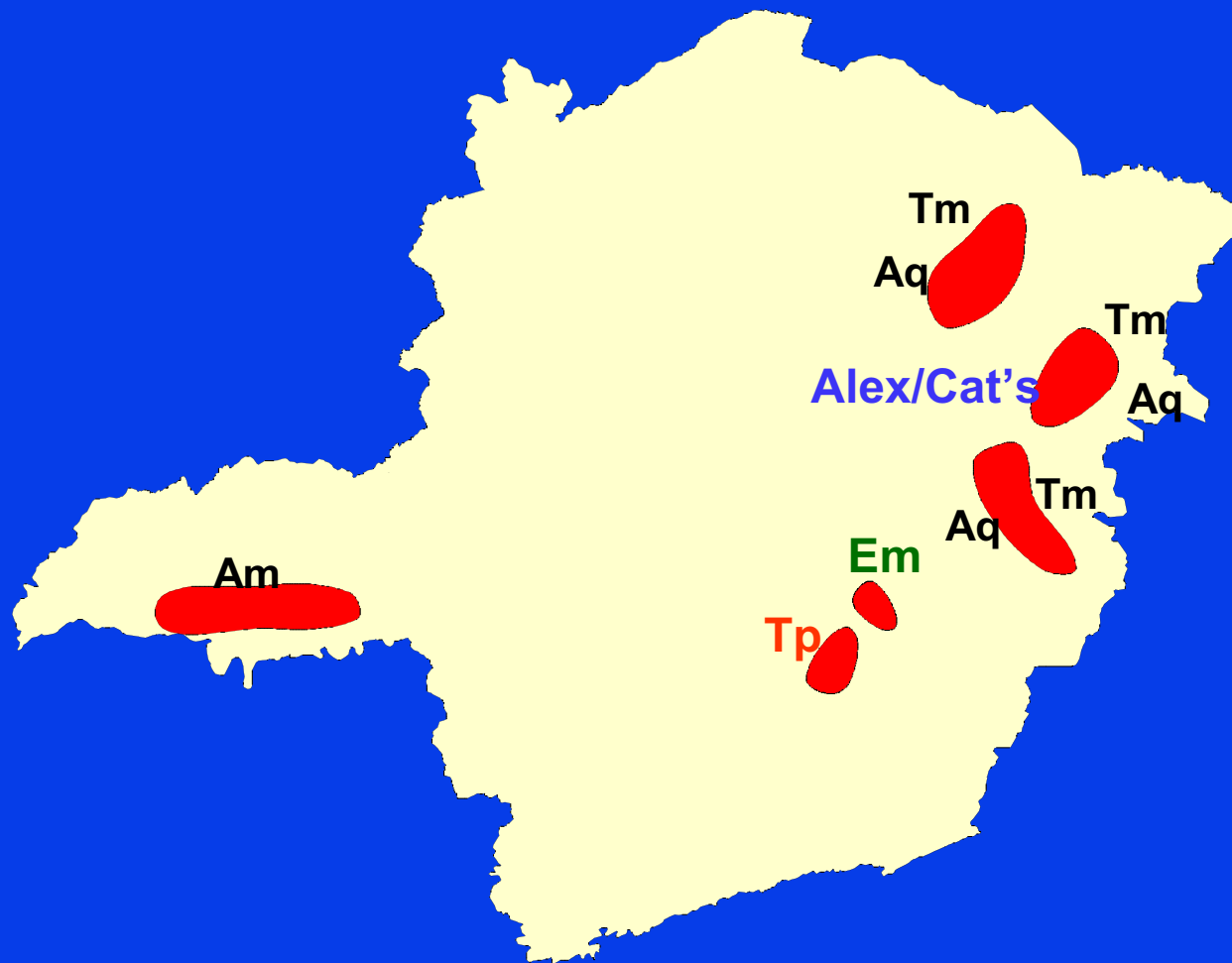


Production

Extraction Techniques

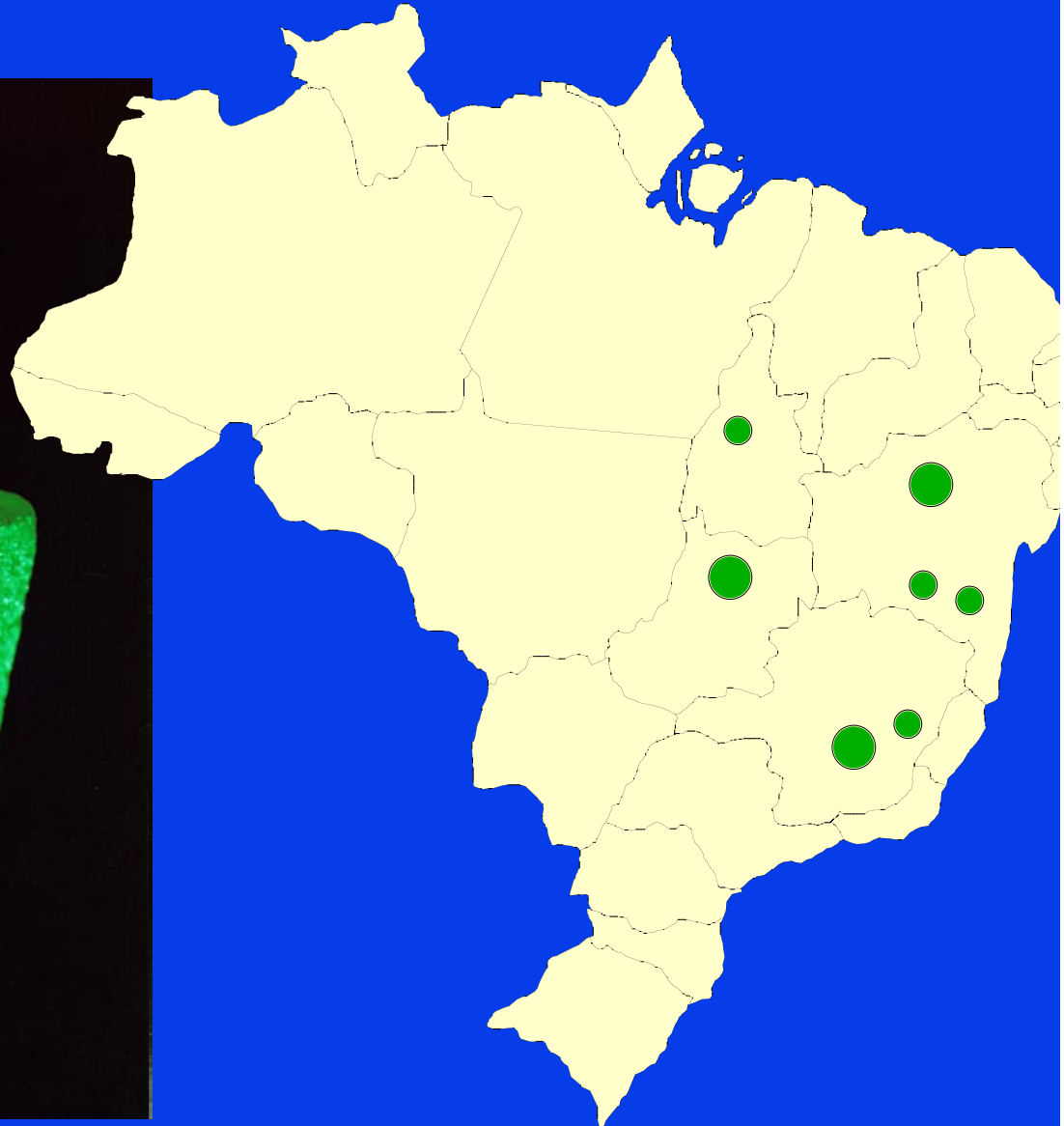
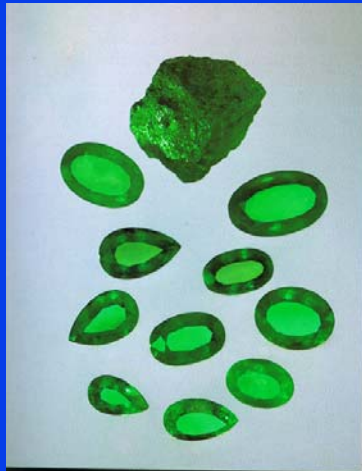
- **Lowlands (alluvial) : pits, suction pumps, trenches.**
- **Slopes (colluvial) : pits, water cannons, trenches, pipes.**
- **Plateaus (alluvial) : pits, pipes, trenches.**
- **Pegmatite deposits (vein) : galleries, pipes, trenches.**

Regions with production of gemstones in Minas Gerais



- ***Production Regions*** : where gems are being mined.
- ***Areas of Occurrence***: where gems are reported and there is no mining activity, or where production is small and discontinuous.

EMERALD



Production Regions:

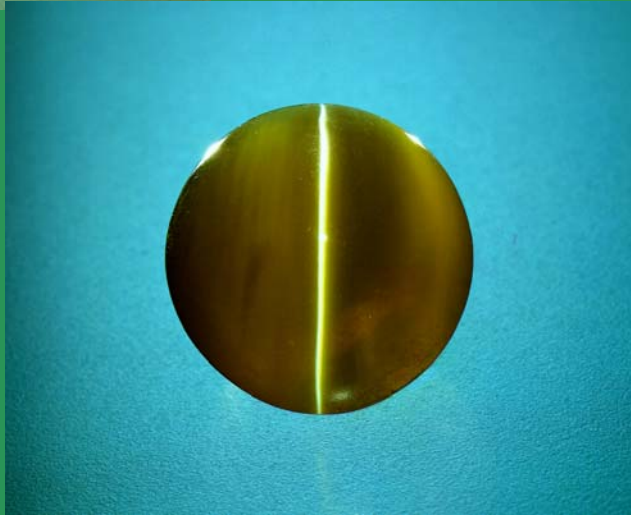
- **Bahia** - Carnaíba, Salininha
- **Goiás** - Santa Terezinha
- **Minas Gerais** - Nova Era (Capoeirana, Belmont)

Main Areas of Occurrence:

- **Bahia** - Vitória da Conquista, Brumado
- **Tocantins** - Monte Santo (recent discovery - May/1997)
- **Minas Gerais** - São Domingos do Prata, Antônio Dias, São João del-Rei, Juiz de Fora, Leopoldina, Mariana, Patos de Minas, Poços de Caldas, Santa Luzia, Uberlândia, Valparaíso, Belo Horizonte
da Safira

CHRYSOBERYL

Alexandrite / Cat's eye



Production Regions:

- **Minas Gerais** - Nova Era, Antônio Dias
Malacacheta (Córrego do Fogo)
Padre Paraíso (Faísca, Gil, Cilindro)
Santo Antônio do Jacinto
- **Espírito Santo** - Colatina (Córrego Alegre)

Main Areas of Occurrence:

- **Bahia** - Itamaraju, Teixeira de Freitas, Itanhém, Prado

AQUAMARINES



Production Regions:

- **Minas Gerais** - Teófilo Otoni (Marambaia, Catugi)
Pedra Azul
Medina
Coronel Murta
Araçuaí - Capelinha
Governador Valadares
- **Bahia** - Itambé
- **Rio de Janeiro** - Itabapoana
- **Rio Grande do Norte** - São Tomé
Acarí
Lages Pintadas
- **Paraíba** - Seridó
Pedra Lavada
São Mamede

TOURMALINES



Production Regions:

- **Minas Gerais** - Governador Valadares (Cruzeiro, Golconda, Santa Rosa e Jonas).
Araçuaí-Salinas (Xanda, Limoeiro, Morro Redondo, Toca do Onça).
- **Paraíba** - Salgadinho (Batalha).

Main Areas of Occurrence:

- **Ceará** - Solonópole, Quixeramobim, Quixadá.
- **Goiás** - Minaçu, Peixe, Formoso, Crixás, Xambiocá, Pium

AMETHYST



Production Regions:

- **Rio Grande do Sul** - Santa Maria, Iraí
- **Pará** - Alto Bonito, Vila Esperança
- **Bahia** - Jacobina (Grotta Coxo)
- **Goiás** - Minaçu
- **Minas Gerais** - Uberaba.

Main Areas of Occurrence:

- **Minas Gerais** - Itamarandiba
- **Goiás** - Cavalcanti

IMPERIAL TOPAZ



Production Regions :



**his work was coordinated by Kalil K. Elawar and Jorge Pereira Raggi (Geoconômica Minas Ltda.)
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The End



