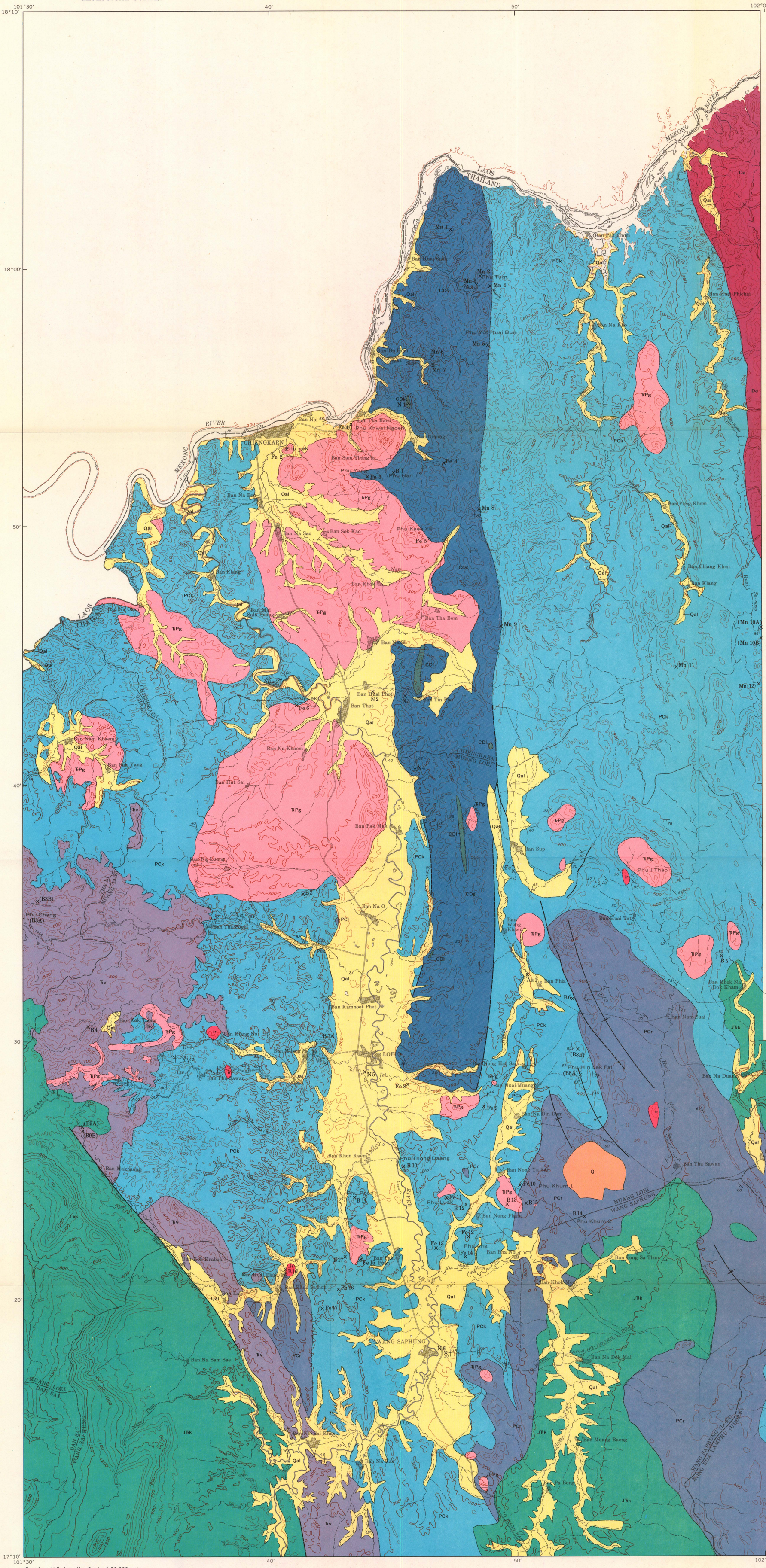
PREPARED ON BEHALF OF THE
UNITED NATIONS DEVELOPMENT PROGRAMME
PROJECT OF THE MEKONG COMMITTEE
IN COOPERATION WITH
THE ROYAL THAI DEPARTMENT OF MINERAL RESOURCES

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 618
PLATE 1



EXPLANATION

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS

QUATERNARY

Qal — Alluvium and terrace deposits
Clay, sand, and gravel

Ql — Laterite

TRIASSIC AND JURASSIC

JTrk — Lower and middle Khorat Series
Conglomerate, sandstone, siltstone, and shale

TRIASSIC (*Lower Triassic*)

Trv — Volcanic rocks
Andesite, rhyolite, tuff, and agglomerate

CARBONIFEROUS AND PERMIAN

PCr — Ratburi Limestone
Massive limestone with some shale, sandstone, and quartzite

PCk — Kanchanaburi Series
Sandstone, siltstone, shale, tuff, and limestone

DEVONIAN AND CARBONIFEROUS

CDs — Sandstone, quartzite, phyllitic shale, slate, and limestone

CDl — Limestone

DEVONIAN OR OLDER(?)

Da — Argillite, quartzite, slate, phyllite, and schist

INTRUSIVE ROCKS

PERMIAN OR TRIASSIC

TrPg — Granodiorite
Locally granite, quartz diorite, or quartz monzonite

AGE UNKNOWN

ir — Intrusive rocks undivided

Inferred contact

Inferred fault

Synclinal axis — Anticlinal axis

60 — Strike and dip of beds

B7 — Mineral prospect

Cart track
Accessible by motor vehicle in dry season, December to May

LIST OF MINERAL PROSPECTS

Base Metals (copper, lead, and zinc)

B 1. Phu Han-Phu Sang (includes barite)
B 2. Phu Lek (Ban Na Muang)
B 3. Tagua (B3A) and Phu Suan (B3B)
B 4. Huai Hob
B 5. Ban Khok Na Dok Kham
B 6. Phu Sam Rua
B 7. Phu Tham Sua
B 8. Phu Hin Lek Fai (B8A) (includes iron) and Phu Hin Lek Fai North (B8B)
B 9. Rong Rae (B9A) and Khok Peng (B9B)
B 10. Phu Thong Daeng
B 11. Phu Poon-Phu Pa Phai
B 12. Phu Baw Lek
B 13. Non Khok Kaw
B 14. Phu Khum 1 (Ban Khok Mon)
B 15. Phu Khum 2 (Ban Nong Ya Sai) (includes iron)
B 16. Ban Huai Phuk
B 17. Khum Thong

Iron

Fe 1. Pone Bak Thek
Fe 2. Phu Lek (Chiengkarn)
Fe 3. Phu Yang
Fe 4. Phu Hia
Fe 5. Phu Kaeo Yai
Fe 6. Phu Lek (Ban That)
Fe 7. Ban Sup
Fe 8. Phu Lek (Ban Mak Bit)
Fe 9. Ban Rai Tham
Fe 10. Phu Noi
Fe 11. Phu Luak
Fe 12. Phu Ang
Fe 13. Pa Pao
Fe 14. Phu Fai Mai
Fe 15. Phu Khok-Phu Khum Thong
Fe 16. Phu Din Baw Eelert
Fe 17. Phu Phun

Nonmetallic

N 1. Pha Baen cement limestone
N 2. Ban Huai Phot barite
N 3. Ban Tin Pha barite
N 4. Baw Hin Khao barite
N 5. Loei gypsum
N 6. Wang Saphung gypsum

Manganese

Mn 1. Huai Muang
Mn 2. Phu Lon
Mn 3. Huai Khok Kha
Mn 4. Huai Kan
Mn 5. Huai Tad
Mn 6. Prakit
Mn 7. Ban Dong Mak Fai
Mn 8. Phu Hin Lek Fai (Nam Huai)
Mn 9. Phu Tham Mup
Mn 10. Huai Nam Kam (10A and 10B)
Mn 11. Huai Pla Kang
Mn 12. Huai Tab Chang

Gold

Au 1. Ban Phia

SOURCES

1. Bleackley, D., Stephens, A. E., Cratchley, C. R., Workman, D. R., Newman, D., Cogger, N., Sanevong, P., Thanvaranchon, P., Intrakhao, B., and Chaungpaisal, S., (1965). Map revised by H. S. Jacobson.
2. Unpublished field data contributed by A. E. Stephens, D. Bleackley, and D. R. Workman, United Kingdom Overseas Geological Surveys; H. S. Jacobson and C. T. Pierson, U.S. Geological Survey; Boonmai Inthuputi, Saner Prapassornkul, Thawat Japakasetr, Aran Sukwiwatana, Wataki Yuyen, and Nikorn Nakornsri; Thai Dept. of Mineral Resources; and R. D. Stewart, Union Oil Co.
3. Bourret, R., (1925)
4. Brown, G. F., and others, (1951)
5. Kobayashi, Teiichi, and others, (1964)

Base from U.S. Army Map Service 1:50,000 series topographic maps, L708 and L7012

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Compiled by H. S. Jacobson 1965–66

GEOLOGIC MAP OF THE LOEI- CHIENGKARN AREA, NORTHEAST THAILAND

SCALE 1:125 000

2 0 2 4 6 8 10 KILOMETERS

2 0 2 4 6 8 10 MILES

CONTOUR INTERVAL 100 METERS ABOVE 300 METERS AND 40 METERS BELOW 300 METERS WITH 200 METER AND 20 METER SUPPLEMENTARY CONTOURS