大正十一年十二月

山口 縦行二横行三〇
地質説明書

地質調査所
第一章 地質

一 下部古生代
二 上部古生代
三 三疊紀

自一頁至三一頁
第一章 地質

千枚岩

千枚岩の分類は石英千枚岩、石墨千枚岩、雲母千枚岩、等。
千枚岩は見事な層理構造を有し、石英、石墨、雲母などの結晶質岩石が含まれています。

下部古生代

石英千枚岩

石英千枚岩は灰色から深緑色の帯状構造を有し、石英の結晶が層状に分布しています。

千枚岩は大きな変成作用を受けた結果、結晶の成長が抑制され、層状の構造が形成される。

千枚岩は、構造変成作用を受けた結果、結晶の成長が抑制され、層状の構造が形成される。

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三叠紀

（一） レートィック

石灰岩

岩石は灰白色で、大粒小粒を含む。厚狭郡産のものが多い。

砂岩

有べてに生代石灰岩の結晶がセララルで、モナラン

頁岩

厚狭郡産合道産、褐灰色を呈し、堅硬で、結晶がセララルで、モナラン。
二．柳石続

（二）

砂岩

岩相・灰白色３号ランヴェートン層ノ層別スルコト因難ナリ

岩相・灰白色３号ランヴェートン層ノ層別スルコト因難ナリ

岩相・灰白色３号ランヴェートン層ノ層別スルコト因難ナリ

岩相・灰白色３号ランヴェートン層ノ層別スルコト因難ナリ
九

辻岩質角巻岩

豊浦郡・豊田郡、豊田県内に分布する。

【岩質】
辻岩質角巻岩の主成分は長石、微細な石英、斑状の葉状花崗岩からなる。

【岩石】
輝石類と長石が主成分で、輝石は主に緑泥石から形成されている。

【性質】
辻岩質角巻岩は耐久性が高く、建築用に用いられる。

十

角閃石巖

豊浦郡豊田町に分布する。

【岩質】
角閃石巖は長石と角閃石が主成分で、微細な角閃石が岩石のフレーク構造を形成する。

【岩石】
角閃石の傾斜層がよく発達しており、岩石には層相が見られる。

【性質】
角閃石巖は耐久性が高く、建築用に用いられる。
十


十


十
第二十一 練密石英斑岩
岩石：灰色

第二十二 長石斑岩
岩石：灰色

第二十三 長石斑岩
岩石：灰色
観音鎌山

本鎌山は美福郡大田村木津にあり、海抜四百五十米です。鎌山山頂から南西に七十五度左右を進むと、鎌山は二千五百貫支持を指しています。鎌山の平均品位は百分中鋼三九、鈦三九、磷二九、鉄一九、酸七九、亜鉛三九、鎘一九で、その平均品位は百分中鋼三九、鈦三九、磷二九、鉄一九、酸七九、亜鉛三九、鎘一九です。
薬王寺鍾山

佐々波鍾山
経塚山

（二）接觸鉱床

福嶺山

（三）原生鉱床

大石寺鍛山

（一）鉱床
日本の東北地方の地質に関する記述。
中福層 有長大体附近 発達し 中層ノ上三十三尺 アリテ厚さ ネ一尺 乃至一尺

高福大島広域平原炭礦 テニ誌 採採

二重石層ノ上部ニ位スレツ炭厚大ニシハニテハ十五尺ッ

数ノ炭層ノ石炭ヲ本分析ニテ分析セシ結果ノ如レ
十一 鑑泉

湯田温泉・古駒郡山口町八日木・アリチ湖畔川ノ流城ニ位シ四国の戸塚海

圧十八米ヲ及バリ温泉・壌壌・処ニ永正四年四余年ノ前ノ発見ニ係リ現時ヲ含ハテ

久下・砂礫層ニシテ厚さ四五尺ヲ越トモ其以下メ carne溫泉・東西ニ

南北一町間ニ於テ地表下六尺内外ノ砂礫層中ヨリ湧出し直徑三尺巻八尺ノ

至十一尺ノ井戸ヲ穿キテ多数ノポンプニテ汲出し温泉ノヘ約ニ十二三尺ノ温

度ヲ有リ冬季低温ニニノアリ夏ニリソノクリ寸クラルニ冬季高クノアリ大八月十二月

ノ時ヲ発見セシズロ川等ヲ流ル・錦川ノ沿岸ニ羅列シ温泉ノ水温ヲ変化トシテノ関係ニ於テ

泉ヲ単純泉ト属シ温度低温ク温泉ヲ加へノ漎ヲ併ス

ハ精細ナル観測ヲ要スルモノラ
EXPLANATORY TEXT
OF THE
GEOLOGICAL MAP OF JAPAN
Scale 1:75,000

YAMAGUCHI
Zone 30 Col. XXII
Sheet 263

By
Tsunomu Ogura

Geology

Lower Paleozoic. The phyllite is composed of quartz as essential and graphite, mica, chlorite, epidote as accessory ingredients, and according as these ingredients differ, quartz phyllite, graphite phyllite, mica phyllite, chlorite phyllite are distinguished. The thickness is estimated to be about 2,000 m. The strike of the formation is N.N.W. near Yamaguchi with a dip W.S.W. 40°, but near Ogori it gradually changes toward South 40°, thus forming a semi-domal structure.

Upper Paleozoic. The thickness measures about 5,000 m. The general dip is 40° N.N.W., though it varies in different places. Limestone at Nanganobori and Akiyoshi embeds fossils such as Echthyophyllum, Productus, Fasulina which suggest that this formation may belong to the Permo-Carboniferous.

Rhaetic. The thickness is about 3,000 m. The general strike is N.-S. with the dip W. 30°, though it varies in places. Near Yamanoi, sandstone embeds abundant plant fossils such as Cladophlebis, Dictiophyllum, Baiera, by which the Series has been
determined to belong to the Rhaetic, though the rocks of the Series much resemble those of the Upper Palaeozoic.

**Inkstone Series.** The red tuff, characteristic of this formation, is distinguished from that of other formations by its brownish colour. It is the raw material of the well-known Akamagaseki inkstone to which the name “Inkstone” was first applied. The thickness as measured is about 3,500 m. The general strike is E.N.E. with the dip N.N.W. 40°–60°.

**Jurassic.** The general strike is N. 50° E. with the dip N.W. 40°–50°. Clayslate and sandstone embed abundant ammonites such as **Hildoceras, Grammoceras, Harpoceras, Coeoceras** by which the formation has been determined to belong to the Upper Lias.

**Tertiary.** The formation lies unconformably on the Mesozoic or granite, near the contact with which the dip is rather steep, being 18° in its inclination, though the strata is generally undulatory with an angle less than 5°.

**Diluvium and Alluvium,** composed of clay, sand and gravel, develop along the river and the coast.

**Peridotite** intrudes the phyllite in sheets and almost alters to serpentine. **Porphyrite** occurs mostly in the Mesozoic as dykes or sheets. **Gabbro** intrudes the Mesozoic in small bosses near Gesan and Hinomine. **Biotite granite, granodiorite, quartz diorite and quartz hyperite** are differentiation products of the granite magma. Biotite granite forms the inner part of the magma and gradually changes to quartz hyperite near the margin. **Hornblende granite and granite porphyry** intrude the Palaeozoic formation in small bosses. **Quartz porphyry** occurring in dykes or flows intrudes the granite, Palaeozoic and Mesozoic. **Orthophyre,** being the youngest eruptive rock in the area, covers the Palaeozoic and Mesozoic.
The Naganobori and Ōda mines are situated in Hananoyama, near Naganobori. Five deposits are found around Hananoyama, occurring in the limestone near the contact with granite porphyry. Of the five deposits, the largest measures 120 x 300 x 20 feet, and has been worked to a depth of 300 feet. Ores are chalcopyrite, bornite, tetrahedrite, malachite, cuprite, cobaltite, and gangue minerals hedenbergite, garnet and calcite. The mine was closed several years ago.

The Ofuku mine is situated in Ofuku-mura and yielded about 120,000 pounds of copper in 1919, 27,700 pounds in 1920, and 2,314 tons of copper ore in 1921. The deposit occurs in the Palaeozoic and it is considered to have replaced lenticular limestone interbedded in hornstone. Its dimensions are about 100 x 260 x 45 feet, the longer axis almost coinciding with the strike of the Palaeozoic. Ores are chalcopyrite and malachite with calcite and garnet.

Iron ore. The Dairyoji mine. A fissure vein occurring in the Palaeozoic sandstone, trends N. 33° W. with the dip N.E. 55°, being 5 feet in thickness. The ore is magnetite with a small quantity of iron pyrite.

The Fukurei mine is situated in Ofuku-mura. The deposit occurs in the contact zone of the limestone with quartz diorite, being known 80 feet in stope, 30 feet in pitch, and 5 feet in thickness. Ores are magnetite, iron pyrite, limonite with chalcopyrite, and the gangue minerals calcite and garnet. The limonite probably has been altered from iron pyrite.

The Miné and Meiji mines are situated on the limestone plateau of Ofuku. The ore is limonite which occurs as small pebbles, or masses, scattered in residual clays with limestone.

Tungsten ore occurs in quartz veins in granite. At Aio and Fujioyama, it was mined several years ago.

Coal. Coal is found in the Rhytonic and the Tertiary. Coal in the Rhytonic is being worked in Ōmine and Tsubitsa, the latter district being less important economically. The seams intercalated in sandstone run N.W. with the dip S.W. 30°-40°. Of six workable coal seams three are of little importance, being worked only occasionally and in spots. The Jōse, or lower, seam has a thickness of 4-5 feet and may be traced for some distance, though it is often interrupted by quartz porphyry dykes. It is now being worked by the Momoeoki, Ariyawa, Hinokiyama, Yokomichi and Tashiro collieries. The Jōse, or upper, seam is 60-100 feet above the former and 3-8 feet in thickness. One colliery, the Kusuigawa, is working the seam. The Inoki seam, the uppermost, 500 feet above the Jōse, is 3-7 feet in thickness. The total production of coal in the district was about 44,000 tons in 1920, and 60,600 tons in 1921. Coal in the Tertiary occurs near Funaki. Seven coal seams are now being worked there, their thicknesses being from the lower 3.5 feet with thin 2 or 3 partings, 4.0-4.7 feet with 3 thin partings, 1-1.3 feet, 4 feet with 3 partings, 1 foot, 2.5 feet with 1-3 partings, and 3 feet with 1 parting. The collieries in this district are the Okida, Banjō, Kigyō, Hirabara, Nagata, Hagimori, Funaki, Sanjō, Dairiki, and the Kunitsugiyama, yielding about 61,000 tons in 1920 and 66,000 tons in 1921.

Building stone. Pyllite, limestone, sandstone, porphyryite, gabbro, granite, granite porphyry, quartz diorite, and quartz porphyry are quarried in several places for local use. Marble is quarried at Akiyoshi for ornament, furnishings electrical fittings etc.

Lime. Limestone is burnt out in the margin of the Akiyoshi plateau and in several detached places. It yielded over 53,400 tons of quick-lime in 1920.

Inkstone. Red ink near Makura and Funaki is quarried as
the raw material for inkstones the output in 1920 being about 30,000 pieces.

**Hot springs.** At Yuda a saline spring issues from the alluvial sand and gravel at a depth of about 2 m. Its temperature varies from 40° to 50°C.