

	1908	1909	1910	1911
Denryōkō.....	11,841 tons.	12,026 tons.	19,423 tons.	17,385 tons.
Kiirun.....	13,089 "	24,914 "	32,944 "	40,036 "
Shinō (Hatto).....	6,911 "	8,547 "	7,528 "	17,642 "
Sekisakkō.....	4,219 "	2,061 "	3,507 "	2,743 "
Kunimi.....	1,800 "	1,062 "	4,186 "	2,050 "
Gofun.....	2,250 "	4,434 "	4,787 "	4,236 "

A series of seams outcrops from the south-western flank of Nankōzan across Sanchōri and Rokuehōri, to the south of Kōkwangai, where it disappears beneath the Taihoku plain. Three coal-seams are found, the upper 1 foot, the middle 1.7 ft., and the lower 3 feet in thickness. The correlation of the series is not known, but it appears to correspond to the seventh, which might outcrop here as a result of folding.

After the series has sunk beneath the Taihoku plain, it again appears in the west of Taihoku with the fifth series. It forms a half dome, the total length being roughly 16 km. The angle of dip is S.E. 55° to S. 40° in the south-eastern wing of the dome, while, in the north-western wing, it is generally steep, being 70° to 80° or even vertical. Of eight coal-seams, three are important, their thickness, beginning with the uppermost, being 1.2, 2.5, and 2 feet. The upper and lower seams are of good quality and nearly constant in thickness, while the middle is rather avoided, as it varies in thickness from 1 foot to 7 feet, and the coal is often badly crushed. The series is worked in several places, the Sanshikyaku colliery, about 1 km. west of Sanshikyaku station, being well known; it yielded 4,477 tons in 1908, 3,958 tons in 1909, 4,780 tons in 1910, and 6,953 tons in 1911. At this colliery there are three coal-seams, the upper being 1-2, the middle 3 and the lower 2 feet thick. They strike N. 50° E. and dip S.E. 50°. Numerous faults are met with and the coal in the south-western wing, owing to disturbances, seems impossible to mine. As the lower seam is of good quality and constant in thickness it is the most actively mined, though the other two are also worked.

The beds which outcrop in the form of an elongated dome surrounding the similar outcrop of the sixth series, represent the seventh series, and can be traced for 50 km. Good coal is found west of Zuihō, in the northern wing, where it is actively mined. Westward the series dips with steep angles and is often disturbed, the coal being often badly crushed and at last cut off by volcanic rocks. At Kodō at the eastern end of the southern wing, the dip is gentle, but farther west it increases to 70°. Two or three coal-seams have been examined, the thickness varying from 0.7 ft. to 3 feet. Sanjyashi and the First Zuihō are the principal collieries. In the Sanjyashi colliery, about 1½ km. south-west of Zuihō, the series strikes N. 68° E. and dips N.W. 50°. Three coal-seams occur, with thicknesses, in descending order, of 1.2 ft., 3 feet, and 1.5 ft., the middle one alone being worked. In the First Zuihō colliery, lying on the north-western foot of Sanshōrei, the series strikes N. 60° E. and dips S.E. 40°. Two seams, the upper one foot thick and the lower over 2 feet thick, are being worked. The production of recent years was as follows:

	1908	1909	1910	1911
Sanjyashi.....	723 tons.	4,561 tons.	3,246 tons.	3,351 tons.
First Zuihō.....	1,154 "	3,632 "	4,583 "	2,500 "

*The eighth series.*—This series is best studied where it outcrops in the environs of Shinōkō, about 6 km. east of Kiirun, where it is mined. The general strike is N. 65° E., dipping S.E. 20°. To the south of Daisnikutsu, south of Kiirun, the series has suffered severe disturbance and can be traced no farther. It reappears in the environs of Goto, east of Suihenkyaku and forms an anticline and two synclines, and is also cut by faults. It outcrops still farther westward and sinks beneath the alluvial plain to the north of Keibigai. It is most fully developed in the east, where three coal-seams are found, the upper being 1.2 ft. thick, the middle 3.3 feet and the lower 1 foot. The general strike is N. 70° E., dipping S.S.E. 10°-15°. In the environs of Kōfuku the lower seam has not been found, but the upper is 1.3 and the middle 2.3 feet thick. Shikyakutei, the most important colliery, is situated about 3½ km. south-east of Kiirun, in a synclinal basin. The dip is gentle, being often 20°. There are three seams, the upper being 1.2 ft. thick, the middle 3.3 feet and the lower 1 foot.

As a result of folding, the series appears in the south, where it forms an elongated dome, the outcrop surrounding that of the seventh series. In the northern wing the coal is mined at several places, especially in the eastern part, where it dips N. or N.N.W. 50°. The series is often disturbed by volcanic rocks in the west. To the south-east of Nankōzan, the outcrop swings sharply to the north-east and becomes the southern wing of the anticline. In the southern wing the coal along the upper Kiirun-gawa, eastward from Sekitei, is expected to be mined in the future, and three seams, from 0.5 to 3.3 feet thick, strike almost east, dipping S. 10°. To the east the series is cut by volcanic rocks and turns to the north to unite with the northern wing. The coal has suffered contact metamorphism by volcanic rocks and is changed to anthracite. The total length of the outcrop is about 60 km. Two collieries, the Second Zuihō and Shifunshi, are noted. In the Second Zuihō colliery, about 2 km. north-east of Zuihō, two coal-seams are found, the upper being 1 foot thick and the lower 2 to 7 feet or an average of 2.5 feet, the strike being N. 58° E. and dip N.W. 58°. In the Shifunshi colliery, about 4 km. south of Nankō station, two coal-seams 1 to 3 feet thick are found. As the colliery is on the western end of an elongated dome, the dip is different in both wings, being N.N.W. 40° in the north and S.S.E. 25° in the south. The production of these collieries was as follows: