

## Wallace County.

*Round Hill.*—The seven tributaries have worked steadily sluicing and elevating island blocks barrier pillars left in the old workings. The gold won amounted to 304 oz. 8 dwt. 12 gr., valued at £1,908 9s. 11d.

*The Round Hill Mining Co.* bored an area between the Riverton—Orepuki Main Road and railroad; the results being satisfactory, it was decided to recondition the dams and water-races, also to disconnect the old pipe-line, provide a direct track, together with a satisfactory pipe-line to the area to be opened out. This work was commenced in September.

*Orepuki, Round Hill, Longwoods, Riverton, Tuatapere, Waiau, Te Oneroa, West Coast Sounds, and Stewart Island.*—Ninety men have been employed fossicking, prospecting, driving, sluicing, and elevating the alluvial and sea-beach deposits. The gold won amounted to 567 oz. 16 dwt. 4 gr., valued at £2,980 9s. 3d. The largest producers were J. H. Sorenson and party, with 59 oz. 6 dwt. 15 gr., valued at £337 11s. 10d.

*Preservation Inlet and West Coast Sounds.*—Several parties have been prospecting during the year, but no discoveries of importance have been made.

## Canterbury and Various.

*Canterbury.*—Some prospecting and beach-mining were done on the Ashburton, Rakaia, and Taumutu beaches during the year. Large-scale operations were tried out on the Taumutu—Rakaia Beach, but the results were unsatisfactory, and operations were suspended. Seventeen men won 26 oz. 8 dwt. 12 gr. of gold, valued at £138 6s. 1d.

## DREDGING.

*Upper Nevis Gold-dredging Co., Upper Nevis, Vincent County.*—This company's electrically-equipped dredge was standing for the greater part of the year. During this period some of the water-races were reconditioned and the plant overhauled. Operations were resumed in November, working a single shift daily. A new paddock was opened up. The pontoons of the dredge are 138 ft. long, 35 ft. wide at the bow, and 25 ft. at the stern. They are built of jarrah and ironbark. The ladder is 105 ft. between centres, and is equipped with fifty-seven buckets of 7 cubic feet capacity, which discharge at the rate of ten per minute into a sluice-box 96 ft. long by 6 ft. wide, lined with ripples and perforated plates for saving the gold. Electric power for working the dredge is generated by water from the company's race. A 100 h.p. motor is installed for driving the buckets; one, of 30 h.p., for the winches; and two, of 50 h.p. and 25 h.p., for the pumps. The dredge is capable of dredging to a depth of 60 ft.

*Golden Terrace Extended Gold-dredging Co., Ltd., Lower Shotover, Queenstown, Lake County.*—Dredging operations were carried on by the abovenamed company until the end of May. During this period the dredging-time was 2,492 hours, and 548,000 cubic yards of material was dredged and treated for a return of 441 oz., valued at £2,684 3s. 3d. The dredge was idle from the 30th May to the 7th November. Operations were then resumed by Joseph Sparrow and Sons, Ltd. From the 7th November to the 31st December the dredging-time was 967 hours, and 232,560 cubic yards of material was dredged and treated for a return of 259 oz. 0 dwt. 1 gr., valued at £1,137 0s. 11d. The pontoons of this dredge are 107 ft. long, 40 ft. wide, and 9 ft. deep. They are made of  $\frac{3}{16}$  in. steel plating, braced and stayed with steel sections, and fitted with a series of bulkheads, making each compartment watertight. The tumbler-framing and gantry are manufactured of steel. The gantry is of the hinged type, secured to the deck at four points, the deck at these points having been reinforced with heavy steel plating, 1 in. thick. The whole of the framing from the stern to the bow is thoroughly tied and braced with rolled-steel channels and joists, thus ensuring rigidity. The digging-ladder is 73 ft. long between centres, and is fitted with semicircular and sloping well-plate bulkheads, riveted to the web-plates, making it secure against side bending; when in position it will have an overhang of 15 ft. to enable the dredge to thoroughly dig out the corners of the paddock. The top tumbler is of chrome steel, six-sided, and fitted with steel wearing-plates. The lower tumbler is circular, with hollow shaft and renewable rim. The chain of buckets is manufactured from manganese steel, and the buckets are of the close-connected type. There are seventy-two buckets, each of 8 cubic feet capacity, which will discharge at the rate of eighteen per minute. The bucket-pins are  $5\frac{1}{4}$  in. diameter, each pin having a special-shaped head sunk into a recess in the bucket so as to avoid excessive wear of the tumbler-cheeks and to prevent the pins from turning. The sluice-box is 90 ft. long by 8 ft. wide. The water-supply for the sluice-box and tables is obtained from two 12-in.-diameter Rees centrifugal pumps. The main winch has six drums of cast steel for operating the head and side lines, and a separate ladder-hoisting winch is also provided. A pilot-house is situated at the bow of the dredge, 20 ft. above the deck, and in it all the operating-levers for working the dredge are situated, in control of a man who will have a full view of the dredge and claim during operations. All the machinery on the dredge is electrically driven, each part having a separate motor. The power is developed at Wye Creek, ten miles from the claim, and transmitted across the Kawarau River to the dredge. A total of 500 h.p. will be developed.

*Freshford Dredging Co., Ltd.* (Part of Block I, Wendonside Survey District, Freshford, Waikaka, Southland).—A company has been formed to dredge this area. They purchased the No. 1 dredge from McGeorge Bros., of Waikaka. This steam-driven dredge has been dismantled and transported to the dredging-area, where it is being rebuilt. The pontoons are 80½ ft. overall length by 29 ft. wide. The main engine is a 16 h.p. Marshall compound, fitted with condenser, feed-water heater, and other auxiliaries. The boiler is a 20 h.p. marine internally-fired, return-tube type. The winches are driven by two 5 h.p. Marshall engines. A new bucket-line equipped with thirty-one buckets of 6 cubic feet capacity has been fitted. The sluice-box is 79 ft. in length. The dredge will be completed and operating in March, 1933.

## MINERALS OTHER THAN GOLD.

*Tungsten.*—No scheelite was produced during the year, on account of the continued low values.

*Oil Wells, Southland Oil Ltd.*—Boring operations were continued at the No. 2 bore situated on Section 737, Block 59, Hokonui Survey District, near Centre Bush. Between the 12th and 22nd February the bore was drilled from 1,552 ft. to 1,630 ft. The drilling-rods parted at 560 ft., leaving 1,070 ft. in the bore, and a protracted fishing job ensued, extending over a period of five months. A successful issue rewarded the combined tenacity and skill of the drilling staff. During the work the bore was widened to 5 in. for 1,000 ft., the 5 in. conductor (cemented) was raised, and a shaft of 93 ft. 6 in. deep and 3 ft. 6 in. diameter was sunk. In July 3 in. casing was run to a depth of 994 ft. Drilling, which had been carried on in a series of contracts, was carried to 1,635 ft. Slight gas shows were met with and oil was showing on the sumps during the period of drilling; a marked oil show occurred at 1,560 ft. Operations were suspended on the 31st July. It is stated that boring operations will be resumed on the arrangement of a further contract. The stratum passed through from 1,552 ft. to 1,630 ft. was fossiliferous hard claystone. At about 1,630 ft. arenaceous claystone was met. Work at the Kauana bore is held over until the successful completion of boring at Centre Bush.

## ACCIDENTS.

It is pleasing to be able to record that no fatal or serious accidents occurred in any of the mines and quarries in the district.