The settlement site was previously recorded as archaeological site D49/15, but the grid reference was wrong. This has been corrected and separate recordings made of the hotel site and landing site. The Surveyors Track (site D49/71) starts at the hotel site.

A cat-control camp set up as part of the Kakapo Project in the 1980s was situated within the area of the historic settlement, and the remaining two bivvies at this camp were used as a base during the archaeological survey.

No structures of the old settlement remain standing (Figs 6, 7). The most substantial remains are those of the hotel (D49/46), which consist of a large terrace (19 m long) and the base of a brick chimney (measuring $0.75 \text{ m} \times 1.4 \text{ m}$). Dug into the bank at the back of the terrace is a 4.6-m-long tunnel, which was probably used as a coolstore. A small cove below the hotel site is scattered with ceramic and glass fragments which date to the period of occupation.

An inlet with a small stream at its head separates the hotel site from the rest of the settlement site, where four very distinct building terraces are visible along with many other dug features, including two drainage trenches. It is not clear how much modification occurred when the cat camp was established. From the settlement site a track leads down to the boat landing, where another building platform is located.



Figure 7. A view of the hotel and store buildings when they were used as a private dwelling, possibly in the 1920s or 1930s. (*Pboto: Rakiura Museum, neg. no. 1148; probably taken in 1920s or 30s*).

8.2 MINE ADIT

NZAA Site No. D49/25

G.R. 094 243

This adit was recorded near the shore of the north arm of Port Pegasus by L. Williams in 1982, and was not revisited during the present survey. It was described as being 1 m above sea level, 14.2 m long, 1.5 m wide and 1.7 m high at the entrance. It was partly shored with timber. It is in Section 25, Block III Pegasus District (Application 108). This was originally held by R. Leary.

8.3 DIPROSE BAY BASE

NZAA Site No. 23 (Diprose Bay base) G.R. 087 261

NZAA Site No. 73 (Tramway)

G.R. 087 261

The Diprose Bay Base was previously recorded in 1980 by Cave (cited in Williams 1982). The tramway was originally included in the same record, but it is here given its own site record number (D49/73), as it is a significant site in its own right. It is discussed above (Section 7.2) as one component of the track network of the area.

The archaeological features at Diprose Bay (Fig. 8) are associated with the attempt in 1912–17 by The Stewart Island Tin and Wolfram Lodes Limited to reopen the tin field, which included the construction of the tramway from Diprose Bay up to the western flank of the Tin Range.



Figure 8. Plan of the archaeological features at Diprose Bay, base of the Stewart Island Tin and Wolfram Lodes Limited. Site D49/123—base; Site D49/73—tramway.

The Directors' Reports of The Stewart Island Tin and Wolfram Lodes Limited described the structures established at Diprose Bay as a two-roomed cottage, three huts for men and a blacksmith's shop. A wharf 43 ft long and 18 ft wide was also built, connected to the shore by 2 chains (66 ft) of decked trestling.

The archaeological survey relocated what was probably the blacksmith's shop, marked by a square stone structure (forge?) in a cutting beside the tramway, and two concrete chimney bases on the hillside above the tramway. No sign of the wharf was found, although the description of it being some two chains (20 m) out from the shore suggests that it was in relatively deep water. Although no record was found, it is likely that it was removed at some stage, as it would have posed a danger to boats. The tramway cutting ends abruptly, and this probably marks the point at which the decked trestling started.

9. Pegasus Creek sites

Pegasus Creek drains the western side of the Tin Range south of Trig J. It was in this stream that Louis Longuet found gold in 1882, and he purchased a 50-acre section (Section 1, Block III Pegasus District). This land was later bought by William Todd (S.T. 4/2/1889). Numerous tributaries branch off the creek, but it was those draining the eastern flank of the Tin Range that were of interest to the tin miners. There are large areas of flat ground beginning about 1 km up the creek from its mouth, within which a number of sites were recorded. The south branch of McArthur's Creek runs into these flats, and sites along the lower reaches of this creek are included in this section.



Figure 9. Tin workings. Site D49/56.

At the point where Pegasus Creek flows into the north arm of Port Pegasus are the Belltopper Falls. Immediately above them are the remains of a low dam (see Fig. 9) built to supply water to a pelton wheel at the fish freezing works that were established on the shore opposite Rodgers' hotel and store in 1897. Alluvial workings are to be found immediately above this dam. It should be noted that as Pegasus Creek has been worked for both gold and tin, it is not possible to determine which type of mining the archaeological features are related to. Both gold and

tin ore have high specific gravities, and mining methods for both were largely identical (see discussion in Section 14.1.5).

9.1 GROUND SLUICING, TRUE LEFT BANK PEGASUS CREEK

NZAA Site No. D49/56 G.R. 075 266

A small ground-sluicing paddock, $10 \text{ m} \times 7 \text{ m}$ (Fig. 9). Water was supplied by a water race which runs from further up Pegasus Creek. This site is within the original freehold Section 1, Block III Pegasus District.

9.2 PITS, WATER RACE AND HUT SITE, TRUE LEFT BANK PEGASUS CREEK

NZAA Site No. D49/42

G.R. 074 269

An area of pits in thick, young regenerating bush at the confluence of Pegasus and Longuet Creeks. Tail races from the pits lead to the creek. These sites are also located within the original freehold Section 1, Block III Pegasus District. A hut site is situated on slightly higher ground above the confluence of the creeks. An early plan, S.O. 2005, dated 1882, shows two huts in this location, suggesting that they were originally associated with Longuet's gold prospecting rather than the later (1888) tin rush, although it is likely that the site was reused then.

9.3 HUT SITE

NZAA Site No. D49/43

G.R. 079 272

This is a small hut site, near Site D49/57 (tin workings), measuring $3.4 \text{ m} \times 2.3 \text{ m}$. It is situated in open manuka scrub and ferns, and appears as a small clear space with raised mossy mounds along the old wall lines.

The hut site is within a very small claim, Section 6, Block III Pegasus District (Application 6). This claim had an area of just 3 acres 3 roods and 12 perches. It was held by G. Swain. Swain was one of the original group of prospectors that found tin in Pegasus Creek.

9.4 TIN WORKINGS

NZAA Site No. D49/57

G.R. 079 272

An area of shallow tin workings on the Pegasus Creek flats, 15 m long, with a tail race leading to a meandering stream which flows into to Pegasus Creek.

This site is also within Section 6, Block III, which was held by G. Swain. Swain was one of the original group of prospectors that found tin in Pegasus Creek.

9.5 TIN WORKINGS

NZAA Site No. D49/58

G.R. 082 277

A large set of ground sluicings, with a long tail race leading into Pegasus Creek (Fig. 10). The site consists of three main paddocks, with a total area of 60 m \times 30 m. Water was fed to the workings in a long water race (D49/61) which led down the low ridge from the east.

This site is within Section 1, Block VII Pegasus District (Application 8), which was held by A.E. Livingstone. Livingstone was one of the original group of prospectors that found tin in Pegasus Creek.



Figure 10. Tin workings, Site D49/58.

9.6 TIN WORKINGS

NZAA Site No. D49/59

G.R. 083 276

A long tailrace cut into the soft bedrock (50 m long, bearing 025°) draining a small area of shallow, boggy workings.

This site is also within Section 1, Block VII, held by A.E. Livingstone. Livingstone was one of the original group of prospectors that found tin in Pegasus Creek.

9.7 WATER RACE

NZAA Site No. D49/60

G.R. 088 278

A small water race around a hillside. Starts in a small creek that is a tributary of McArthurs Creek. The destination of the race was not found.

9.8 WATER RACE

NZAA Site No. D49/61

G.R. 084 277

A small water race that runs along hillside to south, then turns down along a low, flat ridge to feed workings at site D49/58.

9.9 TIN WORKINGS

NZAA Site No. D49/62 G.R. 085 278

A set of shallow ground sluicings in an area $12 \text{ m} \times 9 \text{ m}$ (Fig. 11). A small stream runs through the tailings from the southwest, and out through the old tail race to the south branch of McArthur's Creek. This tail race is unusual in that it is divided down the middle by cut timbers (which still bear axe marks) and rocks, making two parallel channels (Fig. 12). The site is within Section 2, Block VII Pegasus District (Application 9). This was held by Robert Scollay.



Figure 11. Tin workings beside McArthurs Creek. Site D49/62.

Figure 12. Double tailrace at Site D49/62. Axe chop marks are still visible on the timbers. *Photo: P. Petchey.*



9.10 TIN WORKINGS

NZAA Site No. D49/63

G.R. 084 279

A large set of relatively narrow sluice gullies, with a single tailrace out to Pegasus Creek (Fig. 13). One long gully runs to the southeast, with two smaller gullies to the northwest and southwest.

This site is within Section 8, Block VII Pegasus District (Application 26). The claim was held by H. Simpson.



Figure 13. Tin workings beside Pegasus Creek. Site D49/63.

9.11 TIN WORKINGS

NZAA Site No. D49/64 G.R. 087 278

An overgrown and generally amorphous area of tin workings/tailings on the true left of the South Branch of McArthurs Creek. Two short water races run into the workings.

This site is in Section 2, Block VII, which was held by Robert Scollay.

9.12 PIT

NZAA Site No. D49/65

G.R. 083 280

A very large pit on the true right bank of Pegasus Creek. Pit measured 2.6 m \times 1.3 m, and was 2.3 m deep. At one end there is a ledge 0.6 m down from the top of the ground surface. The purpose of the pit is unknown, but it was presumably a prospecting pit, although such pits in the Pegasus tin field are generally much smaller in plan, usually 2 ft \times 4 ft (0.6 m \times 1.2 m).

This pit was in Section 11, Block VII Pegasus District (Application 27), which was held by A. Fraser.

10. Western Tin Range sites

A number of tin mining sites are located on the western flank of the Tin Range, in two main groups. The lower, southern, group (located below the tramway and on either side of the Surveyors Track) are in an area that Williams (1965: 200) identified as being covered with a shallow veneer of high-level gravels at an elevation of 700 feet (213 m). The other main concentration of sites is at and beyond the end of the tramway, in areas of stream gravels. The dam and tramway terminus associated with the 1912-17 tin mining company are located within the northern group of sites, although they are functionally linked to the southern group.

Because the western Tin Range sites relate to both of the two major periods of tin mining, their chronology can be difficult to determine. There is good archaeological and historical evidence for some events and their resultant sites (such as the construction of the tramway), but for other sites the picture is not so clear. There is some archaeological evidence for the late working of site D49/49 (alluvial tailings beside the Surveyors Track), but this area was not included in the licences held by the 1912–17 mining company.

10.1 SOUTHERN GROUP

As stated above, these sites are in an area described by Williams (1965) as a thin veneer of sand, gravel and mud (containing some cassiterite) on a Pleistocene terrace. The area was worked during the original tin rush of the 1880s, and was the main area of workings in 1912.

10.1.1 Hut sites

NZAA Site No. D49/37

G.R. 106 283

This is the site of at least two huts (Fig. 14). The Surveyors Track runs through the site.

One hut is represented only by a grid pattern of post holes, with no standing structural remains. The layout of the post holes indicated that the hut measured 5.3 m \times 2.9 m. The remains of the second hut are much more substantial, with sections of the now-collapsed timber-frame, corrugated iron-clad hut still present on the site. This hut measured 4.5 m \times 3 m. A large rata tree is growing immediately behind the hut site. A rusted-out corrugated iron water tank sits beside the track.

These huts were certainly associated with the 1912–17 mining company and their nearby workings (D49/41), as there is no way the building materials could have been brought in other than on the tramway. It is also likely that the collapsed hut is the one that Hall-Jones (1994: 169) refers to as being maintained by Carl Yunge in the 1930s. He quotes E.E. Muir, who stayed in the hut when he walked to Port Pegasus in 1936:



'In the scrub above the tall timber line we passed the old tin mine workings, and then on the border of the forest we came upon the hut formerly used by the mine workers, which is now owned and maintained in first-class order by Mr Charles Younge (Yunge) of Port Pegasus.'

The huts were on Section 20, Block VII Pegasus District (Application 40). This was originally held by T. McChesney, but an ordinary prospecting licence for the area was acquired by the 1912-17 tin mining company in 1912.

10.1.2 Hydraulic sluicings

Track-D49/71.

NZAA Site No. D49/41

G.R. 106 282

This site is the main set of hydraulic sluicings associated with the 1912-17 tin mining company. The main sluice gully is 70 m long \times 20 m wide, with a 40-m-long tail race (Fig. 15).

The main pipeline from the water flume (which ran beside the tramway, fed by race D49/55) runs into the site from the northeast, and is intact although very corroded. At its terminus it splits into two, and each of these smaller pipes has a large screw-valve (Fig. 16). A monitor (Fig. 17) and a pile of spare iron pipes lie nearby. A second monitor lies in an area of tailings in the main workings.

Within the main sluice gully there are several sets of riffles still in place in the tail race. These are constructed from lengths of angle iron slotted together somewhat like a ladder with very tightly spaced rungs (see Glossary, Section 19). Hand-stacked tailings are piled up on either side of the gully.

Two hut sites and a collapsible iron bedstead were also located close to the workings, while two further hut sites (D49/37) are located a short distance to the north.

A water race was carried in a pipeline across the tail race. This race is recorded as site D49/52, and it fed the reservoir and workings recorded as D49/47, 48, 49 (see Figs 18, 19).

The amount of mining equipment that is still to be found on this site suggests that when the first wash-ups by the tin mining company were unsuccessful (a return of &12 on a &9000 investment, see Section 5.2), and the operation was shut down, the mining plant was simply abandoned. The rails on the tramway



Figure 15. Hydraulic sluicings, Site D49/41.

were lifted at some subsequent time, but the equipment left on-site represents a virtually complete hydraulic mining plant. The main supply pipeline, main valves, feeder pipes, monitors and tail race riffles are all still present on the site. All are corroded and obscured by regenerating bush, but the operational system can still be interpreted.

During the survey the height difference between the top of the penstock and the main valves at its bottom was measured at 45 m (using a pocket altimeter⁸), with the measurements carried out over a very short time period to avoid any barometric air pressure changes. This equates to 150 ft of vertical head at the monitor, which would have been a reasonable working pressure for a hydraulic sluicing operation. Contemporary gold sluicing operations in Otago often had a similar pressure available (such as Eagle and Gray's claim at St Bathans, 120 ft; and Johnstone's claim at Blackstone Hill, 150 ft) (New Zealand Mining Handbook 1906: 222, 225).

This area was in Section 18, Block VII Pegasus district (Application 50), originally held by George Tucker. He also held a dam reserve in McArthurs Creek (downstream of the existing dam, D49/38). H.A. Gordon visited Tucker's claim in 1890, but it was abandoned at the time. He commented on an exposed face of cemented gravel, which did not yield good prospects when washed in a tin dish (Gordon 1890: 95). He also makes some ambiguous comments about hydraulic sluicing, saying that the cemented gravel would be too hard to break up by the force of water from a nozzle, even at the head and pressure available. This

Continue to next file: Part 3

 $^{^8\,}$ Thommen 'Everest', 5000 m model, quoted accuracy $\pm\,10$ m.