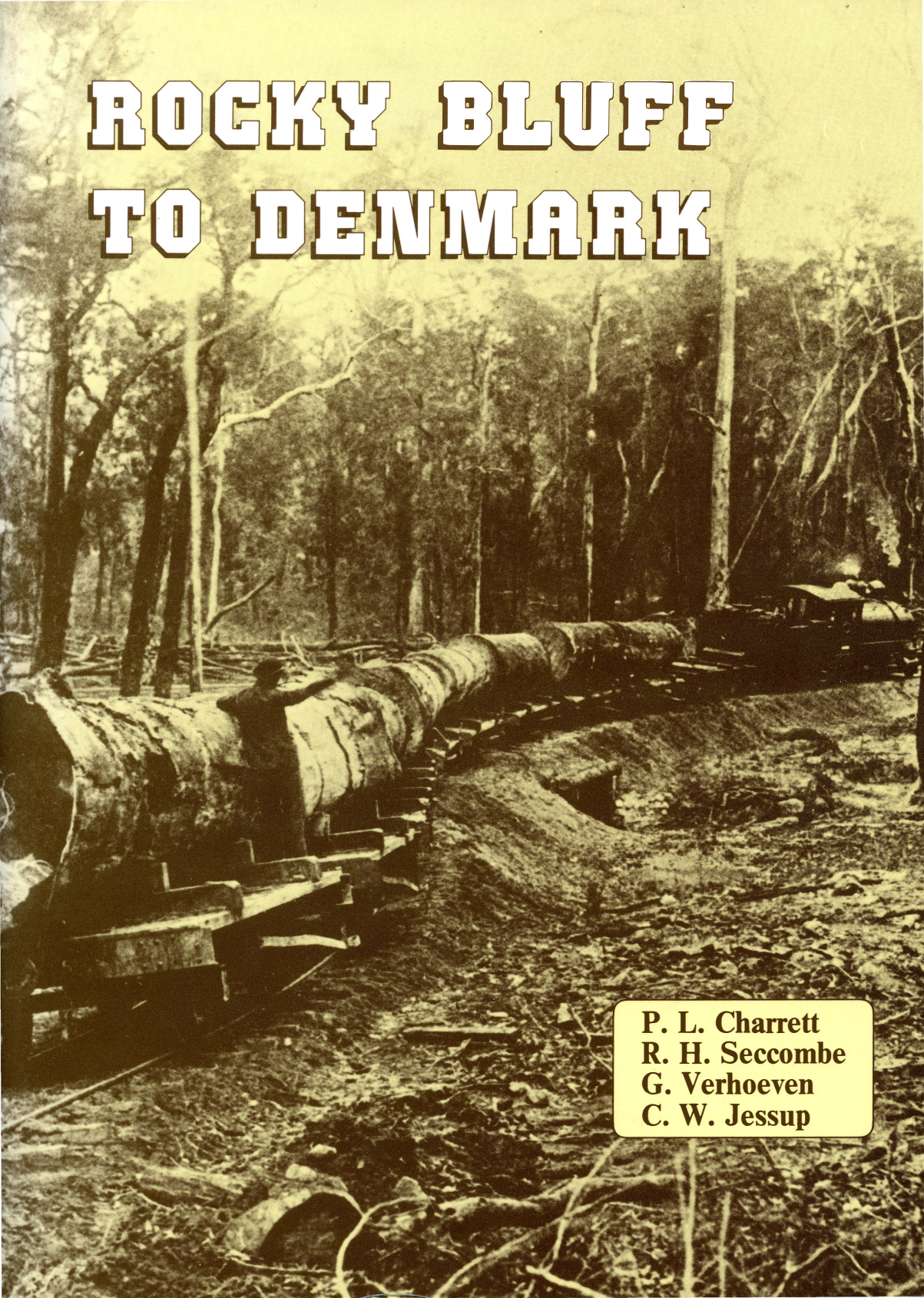


ROCKY BLUFF TO DENMARK



P. L. Charrett
R. H. Seccombe
G. Verhoeven
C. W. Jessup

ROCKY BLUFF TO DENMARK

Twenty-fifth Anniversary Selections
from "Light Railways"

P. L. Charrett
R. H. Seccombe
G. Verhoeven
The late C. W. Jessup

MAPS DRAWN BY G. R. THORPE



LIGHT RAILWAY RESEARCH SOCIETY OF AUSTRALIA
MELBOURNE 1986

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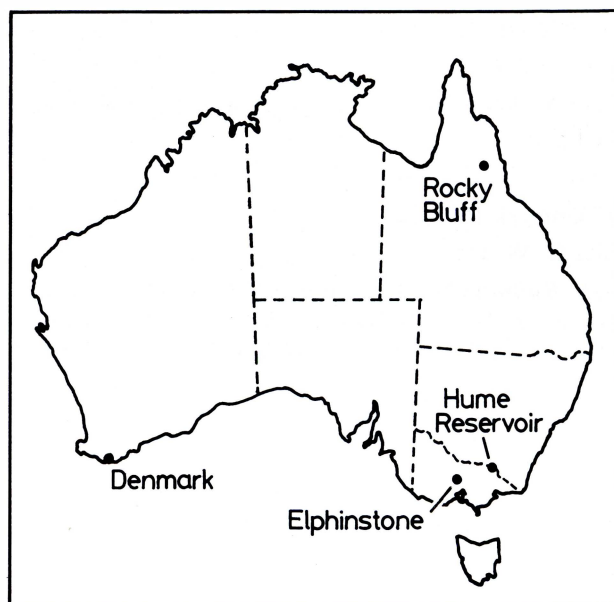
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Publisher's Note

To mark the Society's Twenty-fifth Anniversary we asked a number of long-standing L.R.R.S.A. members to select their choice of outstanding articles from early editions of *Light Railways*. The four articles chosen for this book were clearly the most popular choices. Each is as relevant as when originally published — a tribute to the thoroughness of the authors who set the standards for other L.R.R.S.A. contributors to follow.

Apart from corrections to typographical errors, and minor corrections to tables, the articles have not been altered in any way, hence where they describe the present-day situation, this refers to the late 1960s. The maps have been redrawn, and photographs added.



Foreword

Recently whilst trundling along in the van of one of Australia's restored light railways, I fell to a contemplation of the extensive and significant achievements made in the field of light railway research and preservation during the past three decades. In many cases the goals set years ago by adventurous amateurs have been surpassed, and operating segments of light railway history now exist for the person of casual interest to wonder upon.

It is also fortunate that during this period an increasing number of folk turned their enquiring minds in the direction of investigation, verification and documentation of the extensive use made of this form of transportation during the development of our nation. This is fortunate for, although a handful of interested researchers had recorded a deal of basic information, the field ranges so widely that the need was for a concentrated research effort by numerous people.

Twenty five years ago the Light Railway Research Society came into being and has admirably fulfilled that need.

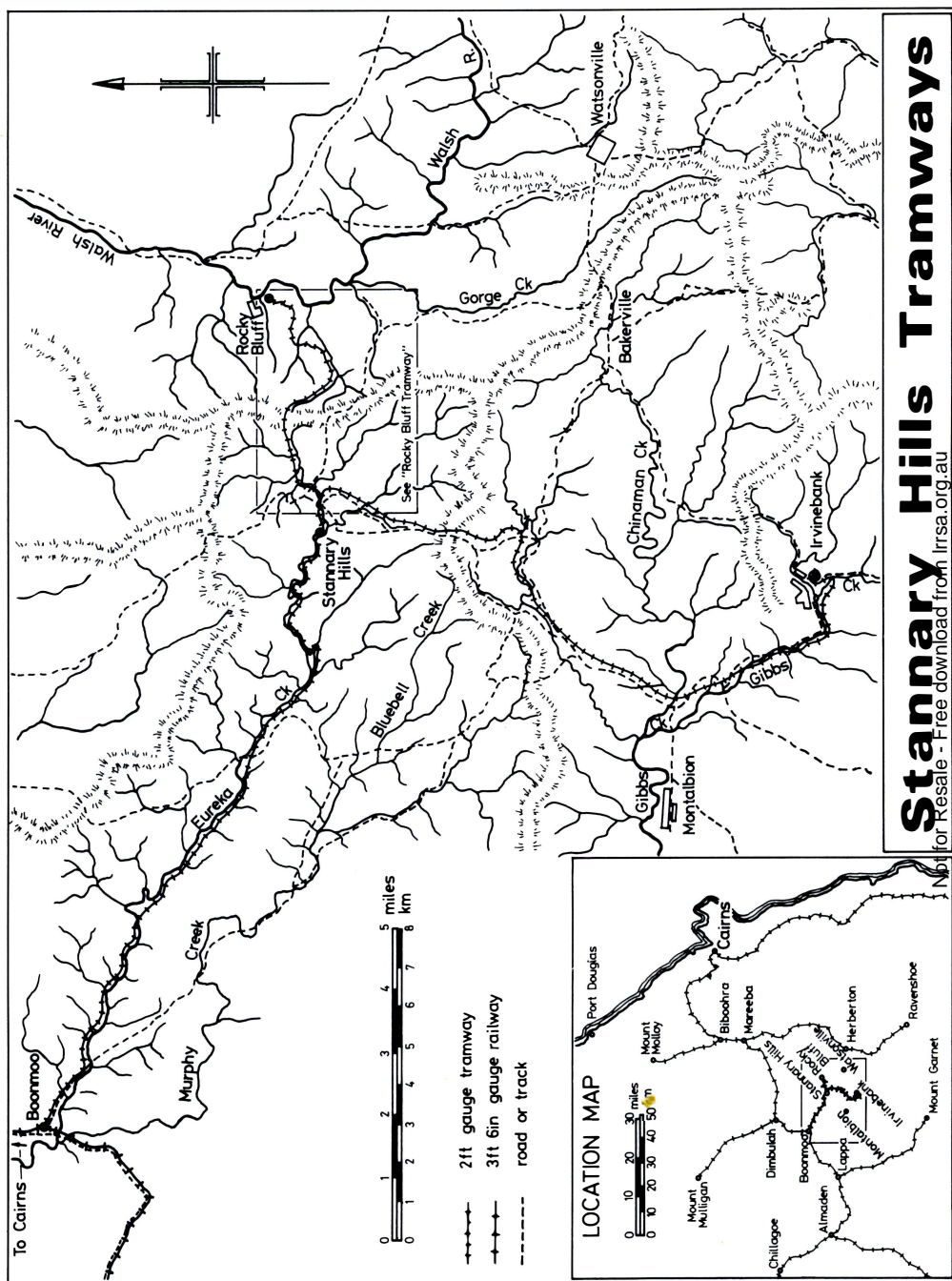
Enthusiastic Society researchers have documented a great amount of material. Not only is this technical in nature but writers have been at pains to place their histories in the context of the communities served.

Correctly, it is often said that history is unfolding at the present, but for that very reason it is often lost. Being aware of this risk the Society also has concentrated on recording contemporary history.

Above all, throughout its existence, the L.R.R.S.A. has communicated. It regularly disseminates information that others might enjoy a little known facet of Australian history and, hopefully, encourage some to add their contribution.

The Society's publications are prepared to a high standard, very well presented and read by many outside the rail enthusiast fraternity. It is indeed fitting that its twenty five years of achievement should be marked by this special publication.

Norm Wadeson
"Kuralie"
Baxter, Victoria



3

Stannary Hills and Rocky Bluff

by Gerry Verhoeven

Before the coming of rail transport this area was served by a Cobb and Co. coach route from Port Douglas, drays and pack animals doing the carting. It was not until the Queensland Government Railways completed the railway from Cairns to Mareeba in 1893 that things really started moving on the Tableland.

The Chillagoe Railway and Mines Co. began building a 3 ft 6 in gauge railway south-westerly from Mareeba, to Lappa; Lappa being reached in 1900. At the 35 mile peg, reached in 1899 or early 1900, a rail-head was established. Originally named "Head of Line", this station became Boonmoo when the line was opened to Lappa, and up and down trains crossed here. Boonmoo was the nearest station to the tin mines around Stannary Hills and Irvinebank, and coaches and teamsters plied from here, until the Stannary Hills tramway was built. A dining room was provided at Boonmoo, but this later became a refreshment room.

The North Queensland Tin Mining Corporation Ltd had mines and leases at Watsonville, Stannary Hills, and Rocky Bluff. Early in 1900, after changing their name to The Stannary Hills Mines and Tramway Company Ltd, this Company began construction of a 2 ft gauge tramway from Boonmoo, along Eureka Creek towards Stannary Hills and Rocky Bluff.

The Company took advantage of the Mining Act Amendment Bill, which was passed in April 1902, this permitted the carriage of goods and passengers on mining tramways. The line was originally intended to go to Watsonville (see map, page 28), but actually never reached there, being diverted to Rocky Bluff, 21 miles from Boonmoo. Public traffic to Stannary Hills commenced on 9 May 1902, and to Rocky Bluff on 18 November 1902. Rails were 30 lb per yard, and 2000 half-rounded sleepers were used for each mile of track.

With the opening of the Stannary Hills tramway, the coaches and teamsters now plied between Stannary Hills and Irvinebank. This type of transport was inefficient, so John Moffat, of the Irvinebank Mining Co. Ltd, decided that Irvinebank should have its own tramway.

Consequently in 1906, the Irvinebank Mining Co. Ltd. commenced construction of a 2 ft gauge tramway from a point 1½ miles east of Stannary Hills to Irvinebank. This tramway was officially opened on 29 January 1907.

Stations and Sidings

At Boonmoo the station master, a CR&M Co. man, also acted as the station master for the Stannary Hills Mines and Tramway Company. Traffic from Cairns to Irvinebank was subject to four sets of rates or fares: QGR, Cairns to Mareeba; CR&M Co, Mareeba to Boonmoo; SHM&T Co, Boonmoo to Irvinebank Junction; and IM Co, Irvinebank Junction to Irvinebank. All material for the construction of the tramways came through Boonmoo, bringing a lot of traffic in 1901-02 and 1906-07.

For the first ten miles from Boonmoo comparatively easy country is traversed, following Eureka Creek. Six miles from Boonmoo a firewood siding or loop was located, and in 1909 a new crossing loop was built here. At ten miles another firewood siding was located, with crossing loop, brick kilns and telephone.

The line then went up Bock's Creek, a horse-shoe bend being located at the 11 mile peg, from whence it turned into the Eureka Creek gorge. The horse-shoe had a route length of 13 chains, the tracks being 66 yards apart across Bock's Creek, with an 8 ft difference in elevation. Three further sidings followed — Kitchener Mine, Ivanhoe and Ivanhoe Extended Mine, and Eclipse Mine, before the Eureka Creek was crossed. After crossing the Eureka Creek, Stannary Hills station yard was immediately entered.

On the left were the tramway workshops and the station. A little further towards Rocky Bluff there was a goods shed on the right hand side. A road went from here for about half a mile to the township of Stannary Hills. According to the Queensland Mining Journal, September 1909, Stannary Hills station building was moved at that time, increased accommodation for goods and a carriage shed being provided at the same time.

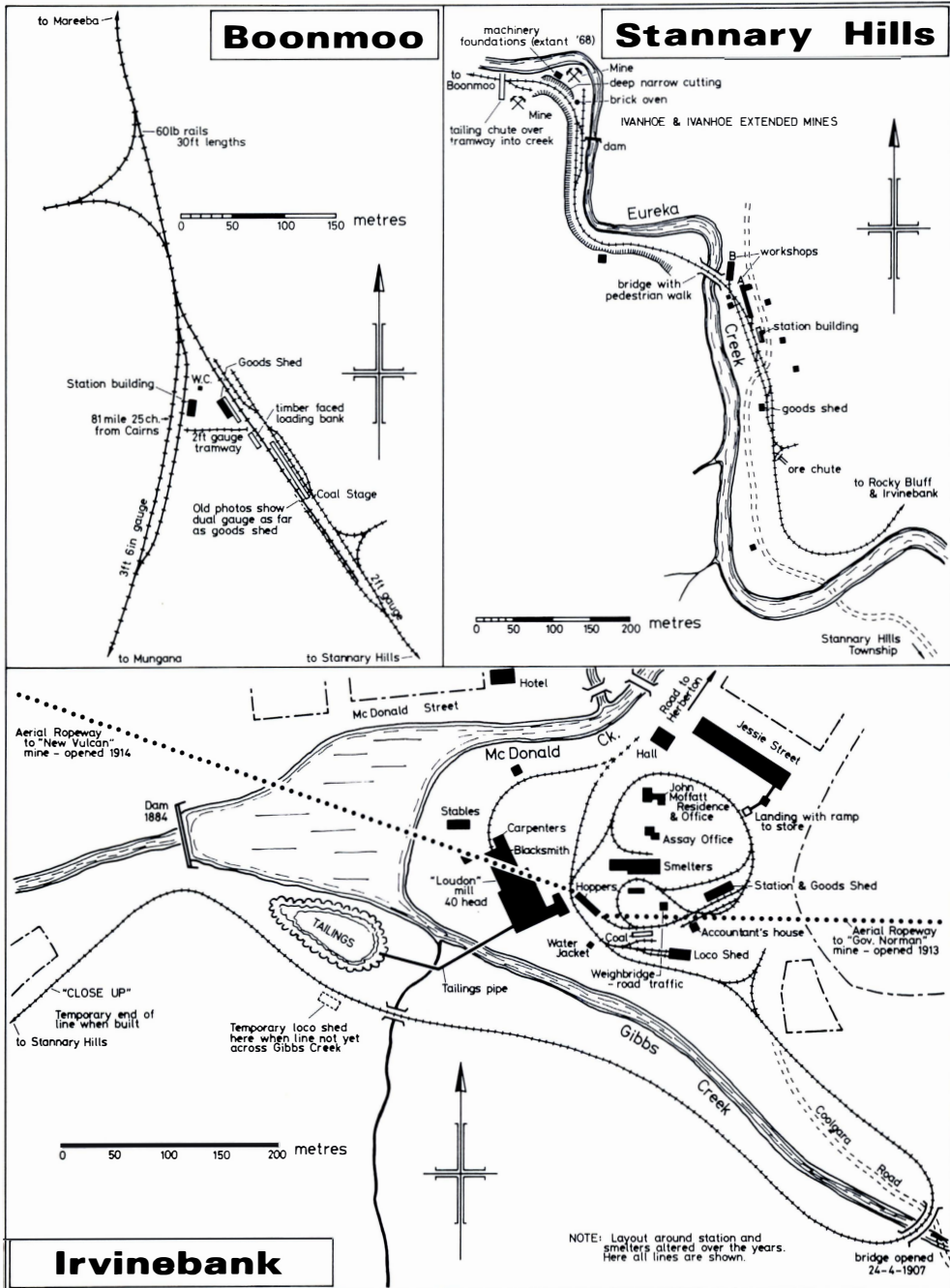
At 14 $\frac{3}{4}$ miles was the Black Bridge. This bridge was about 42 ft high, and about 208 ft long, and was a double deck trestle, i.e., one set of piles rested on the head sills of the bottom set of piles. A sharp curve on the Rocky Bluff end of this bridge imposed a speed restriction of 3 mph.

The Chief Engineer of the QGR furnished me with a "Plan and Section" of the Stannary Hills tramway, signed by Charles I. Stephens, B.E., Assoc. M. Inst. C.E., of Cairns — the Engineer who built the line. According to this plan, the sharpest curve was at 12 miles 22 chains — in the Eureka gorge — being 1 $\frac{1}{2}$ chains radius, on a 1 in 50 grade for an 87 degree 50 minute angle. The Eureka Gorge abounded with two chain curves, and grades of 1 in 40, 1 in 44, and 1 in 50.

After crossing the Black Bridge there seemed to be plenty of grades of 1 in 33, but as this part was not built until after 1906 (to Hale's Siding) it may be doubtful if this survey was used for this section.

Stannary Hills — Rocky Bluff Section

At 15 $\frac{1}{4}$ miles another firewood siding was located, this was put in in 1903, and was later moved to 15 $\frac{1}{2}$ miles. Next stopping place was "The Junction", this being the junction (after 1906) for the Irvinebank tramway, then followed





Gladstone Mine siding, another firewood siding at 16½ miles installed in 1903, and another at 16¾ miles installed in July 1906. Arbouin Bin siding was located at 18 miles, where an ore bin was provided for the Arbouin mine. A deep gully separated this mine from the tramway, and ore was taken along one mile of horse worked tramway from the mine, to a 600 ft aerial ropeway which terminated at Arbouin Bin siding. This siding was put in on 31 March, 1906.

The line terminated at Rocky Bluff, 21 miles from Boonmoo. A stamp battery and treatment works was located here on the Walsh River, about 900 ft below the tramway, and a cable operated four rail funicular connected the tramway terminus with the battery. At the turn of the century Rocky Bluff had a population of 200, and was supplied with electricity and water from the stamper mill.

So far I have been unable to find any information on the track plans of the Rocky Bluff section. A total of 31 bridges were built between Boonmoo and Rocky Bluff.

Irvinebank Tramway Sidings

After leaving "The Junction" both branches of Jubilee Creek were crossed, then Gap cutting or Yorkies cutting is entered. A long siding, or branch, was found in this area. It was for firewood, and also served the Pompeii mine. If continued it would have reached Bakerville and Watsonville. Then followed Hale's Siding, in the vicinity of "Bettyville", where a 10 ft platform and unattended shelter shed was provided.

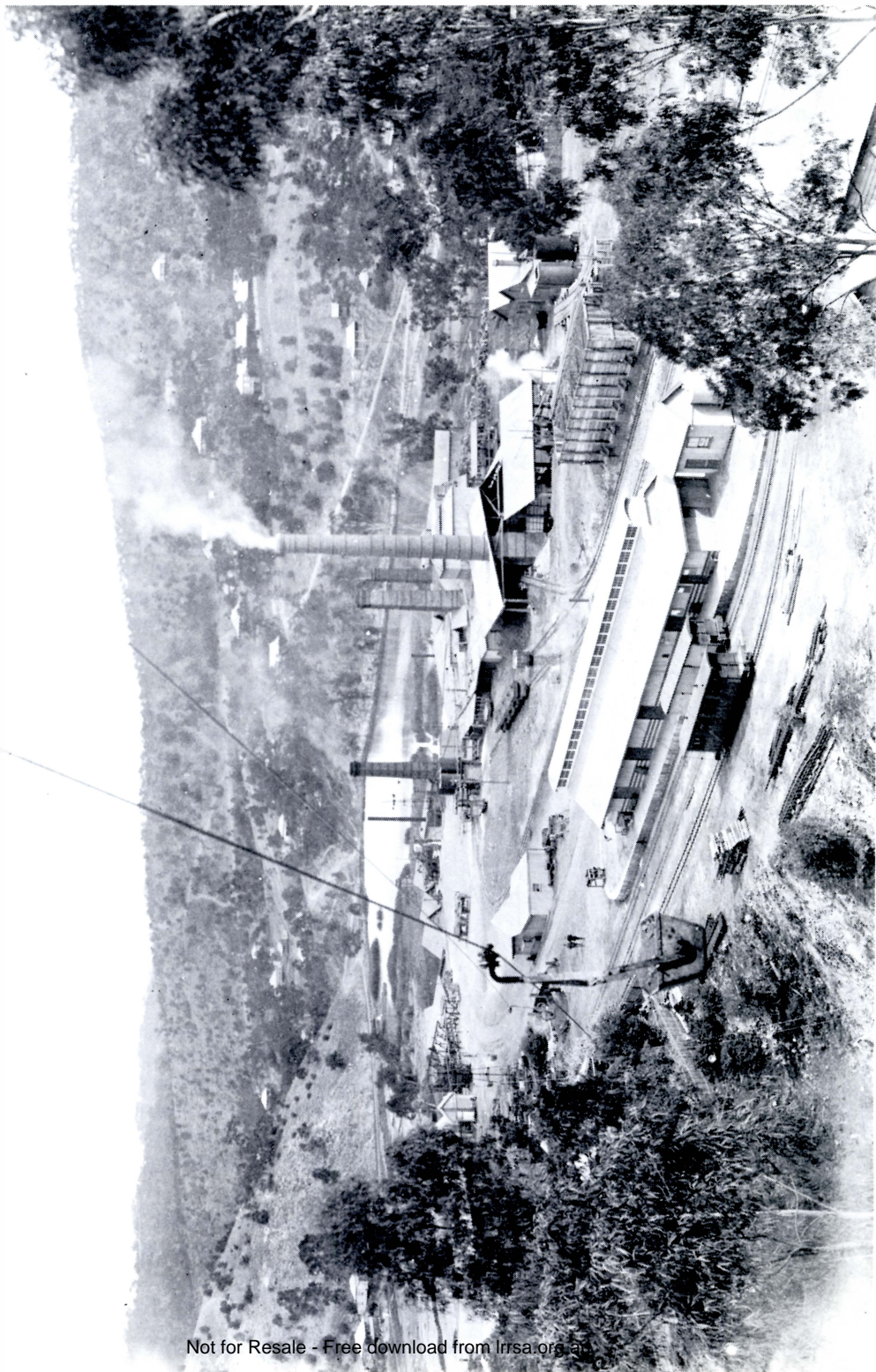
Weinert's Siding, and Humbug Mine Siding followed, copper ore from Humbug mine went to Chillagoe for smelting. Chinaman's Creek bridge was crossed; followed by Victoria Siding, where a 10 ft earth platform, and unattended shelter shed was provided. In 1925 additional siding accommodation was added to provide for increased traffic from Montalbion mine. (See page 37.)

Two miles before Irvinebank, a temporary terminus named "Allbut" was reached. This was situated on a flat below Fireclay Gully, in the vicinity of a picnic ground. Approaching Irvinebank, "Closeup" was reached. Closeup was located above the Irvinebank cricket ground, and below the outflow of the dam. (See diagram, page 31.) This was a temporary terminus until Gibb's Creek bridge, on the outskirts of Irvinebank, was opened on 24 April, 1907.

The last mile or so coming into Irvinebank was quite remarkable, as the line turned in different directions to gain height, and the treatment works was sited on the various levels through which the line went, to make efficient use of the different levels in the handling of materials. Looking at the diagram, on page 31, a tram coming from Stannary Hills would curve across Gibb's Creek and the Coolgarra road, past a triangle and loco shed, then make its way through the

Opposite: Stannary Hills 2 foot gauge tramway locomotive No. 2, 2-6-0T, at Boonmoo, north Queensland.

Photo: G. Bond collection



yard between the ore bins and stamper mill below it, and continue climbing, turning to the right around the Office and John Moffat's residence, until it reached the goods shed and station at the top of the hill.

Lines went from here to the top of the ore bins, coal bins and smelters. Just before coming into the station yard was a landing alongside the line, from which goods could be wheeled to a store in Jessie Street by a long catwalk. At the middle level, so to speak, a branch went off to the bottom part of the smelter, and another went in a zig-zag fashion down to the carpenter's and blacksmith's shop. Coal bins at the loco shed were fed from the line above it.

All ores were brought to the top level — the terminus. They then went either to the smelters, or the treatment works, which were both on a lower level, and along which the main line passed on its way up to the terminus.

A five head mill was installed at the treatment works in December 1884; ten heads being added after 1893; five more being added after 1900; a further ten being added after 1901 — this plant was built by Bundaberg Foundry and is still in operation. A further ten heads were added about 1904, making a total of forty. In 1900 a calciner was added to the smelter, a second dressing plant was opened between 1902 and 1904, and a second (rotary?) smelter was added in 1904. Ores containing lead, silver or copper were sent to Boonmoo, for transport to the big smelters at Chillagoe, where they could be treated.

Irvinebank was a very progressive place, thanks to the drive and energy of John Moffat, and the whole country surrounding it benefitted from his enterprise in the mining industry. The workshops at Irvinebank could tackle almost any job offering. Ores were tested and treated from widely different places in north Queensland, and the town was one of the first in north Queensland to have electricity.

Irvinebank was the headquarters of the tramway system after the Stannary Hills Company closed down, and was always the headquarters of the Irvinebank Company.

Some doubt still surrounds the locations and names of sidings along the tramways. At some of the sidings stub points were used.

Traffic

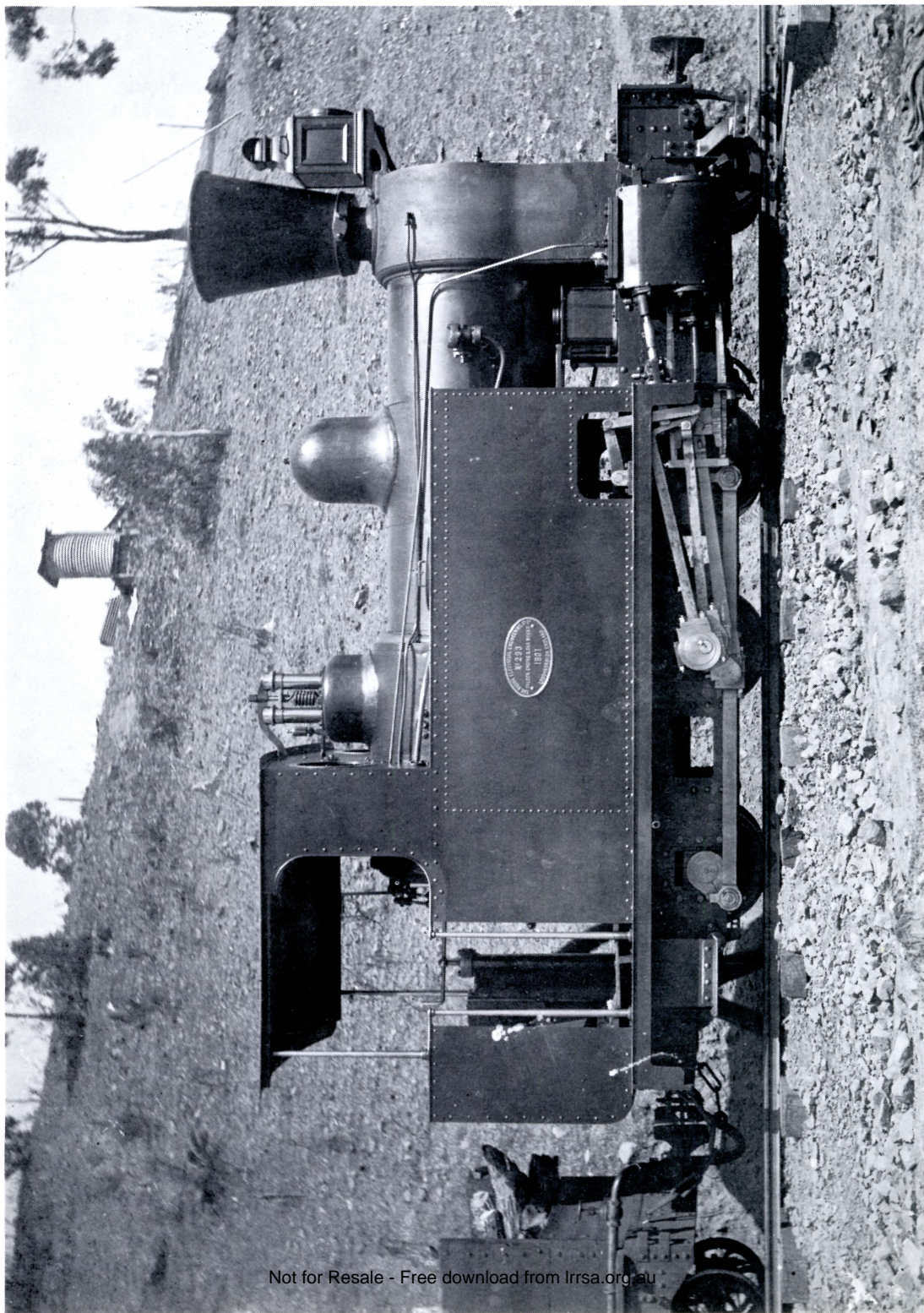
Apart from supplies, machinery, and so forth, there was a lot of traffic in firewood. Firewood sidings were put in, and shifted as the areas were cut out. Yorkies Cutting was the demarcation line, for the firewood to go to either the Rocky Bluff mill or the Irvinebank mill. The main traffic was of course, ores, concentrates, and fluxes.

In later years when the firewood had been almost cut out, coal was brought in from the mines at Mount Mulligan, another of John Moffat's enterprises.

In the 1920s a lot of the slag from the old Montalbion smelters was transported to Chillagoe for retreatment, to obtain silver and lead. Montalbion was

Opposite: Irvinebank, 1913; showing the ropeway from Governor Mine tramline.

Photo: G. Bond collection



situated some four miles roughly west of Irvinebank, and was a big mining centre before Irvinebank took over. By the turn of the century it had ceased operations.

Timetables

Timetables show that prior to 1911, two passenger trains a day were worked each way between Irvinebank and Stannary Hills, and between Stannary Hills and Boonmoo. During 1911 this service was reduced to one service a day, connecting with CR&M trains to Mareeba and Chillagoe.

In 1919 the Irvinebank treatment works was taken over by the Government — as it had become unprofitable — and, together with the Irvinebank tramway, was placed under the control of the Irvinebank State Treatment Works.

In 1922 the Stannary Hills Mines and Tramway Company closed down, and the section of tramway between Boonmoo and The Junction was then also taken over by the Queensland Government. The tramway between Boonmoo and Irvinebank was then worked as one section, and the section from The Junction to Rocky Bluff was dismantled in 1926.

By 1934 the train service had dwindled to one a week, which ran on Wednesdays. Closure followed in 1936. The tramway was dismantled in 1941-42.

Locomotives and Rolling Stock

Stannary Hills Mines and Tramway Company Ltd

No. 1	<i>Pompey</i>	0-4-0WT	Krauss	B/No. 2196 of 1889, locally built tender.
No. 2		2-6-0T	Falcon Engine & Carriage Co.	B/No. 292 of 1897, locally built bogie tender.
No. 3		2-6-0T	Falcon Engine & Carriage Co.	B/No. 293 of 1897.
No. 4	<i>Germany</i>	4-4-2	Borsig	About 1907.

No. 1 was purchased second-hand from the South Australian Government in 1900, having originally worked on the Victoria Dock Construction, Melbourne. (See LR No. 27 p. 16 for details.) It had 6 in x 12 in cylinders, and 24 in diameter driving wheels, and was condemned in 1912, but was still in existence in 1938.

Nos. 2 and 3 had 10 in x 14 in cylinders, 24 in diameter driving wheels and weighed 15 tons. One was taken out of service in about 1912, to provide parts for the other. The remaining engine was known as *Brush*. (The Falcon Engine Works were a subsidiary of the Brush Electric Company.) *Brush* and *Germany* were taken over by the Irvinebank State Treatment Works in 1922, to become

Opposite: Stannary Hills 2-6-0T locomotive, built by Falcon Engine & Car Works, B/No. 293 of 1901, photographed in 1907.

Photo: G. Bond collection

their No. 4 and No. 5. No. 4 was derelict at Irvinebank in 1952 but has since gone. No. 5 was sold to the Cattle Creek sugar mill in the Mackay area after the Irvinebank line was dismantled.

Irvinebank Mining Company

No. 1	<i>Betty</i>	0-6-0T	Krauss	B/No. 5261 of 1905, locally built bogie tender.
No. 2	<i>Baby</i>	0-4-0WT	Krauss.	
No. 3	<i>Old John</i>	0-6-2T	Avonside	B/No. 1539 of 1907, locally built bogie tender.

These three engines were taken over by the Irvinebank State Treatment Works, becoming their Nos. 1, 2, and 3. No. 1 had 9 in x 12 in cylinders and was sold to the Innisfail tramway in 1922. No. 2 was condemned and abandoned in 1922. No. 3 had 10 in x 16 in cylinders, and 3 ft diameter driving wheels, and was sold to Marian Sugar Mill in 1938.

Rolling Stock

During construction of the Stannary Hills tramway, eight four-wheel tipping wagons were used, one of which was converted to a passenger coach, by fitting seats and a roof. By January 1902, the Company had built two 10-ton bogie wagons, and fifty 3-ton four-wheel trucks were in use.

Between April and September 1902 the Company's workshops turned out a 24 passenger bogie saloon coach, a four-wheel explosives van, 4 four-wheel box wagons, 3 bogie flat trucks, 30 four-wheel ore trucks, 17 four-wheel firewood trucks, 4 bogie low-sided trucks, 3 four-wheel timber trucks, and one four-wheel covered goods truck.

In October 1902 the second passenger coach, a 26 passenger bogie saloon, was put in service. The four-wheel passenger coach was now scrapped. The General Manager's report for June 1903 listed the following rolling stock — two passenger cars, one explosives van, four box wagons, three bogie flat tops, 30 ore trucks, eight ballast trucks, 17 firewood trucks, four bogie low-sided trucks, three timber wagons, five firewood trucks under construction, three bogie low-sided trucks under construction, and 20 spare hoppers. Further rolling stock was constructed in later years.

The Irvinebank Company also constructed its own rolling stock, but details are not known.

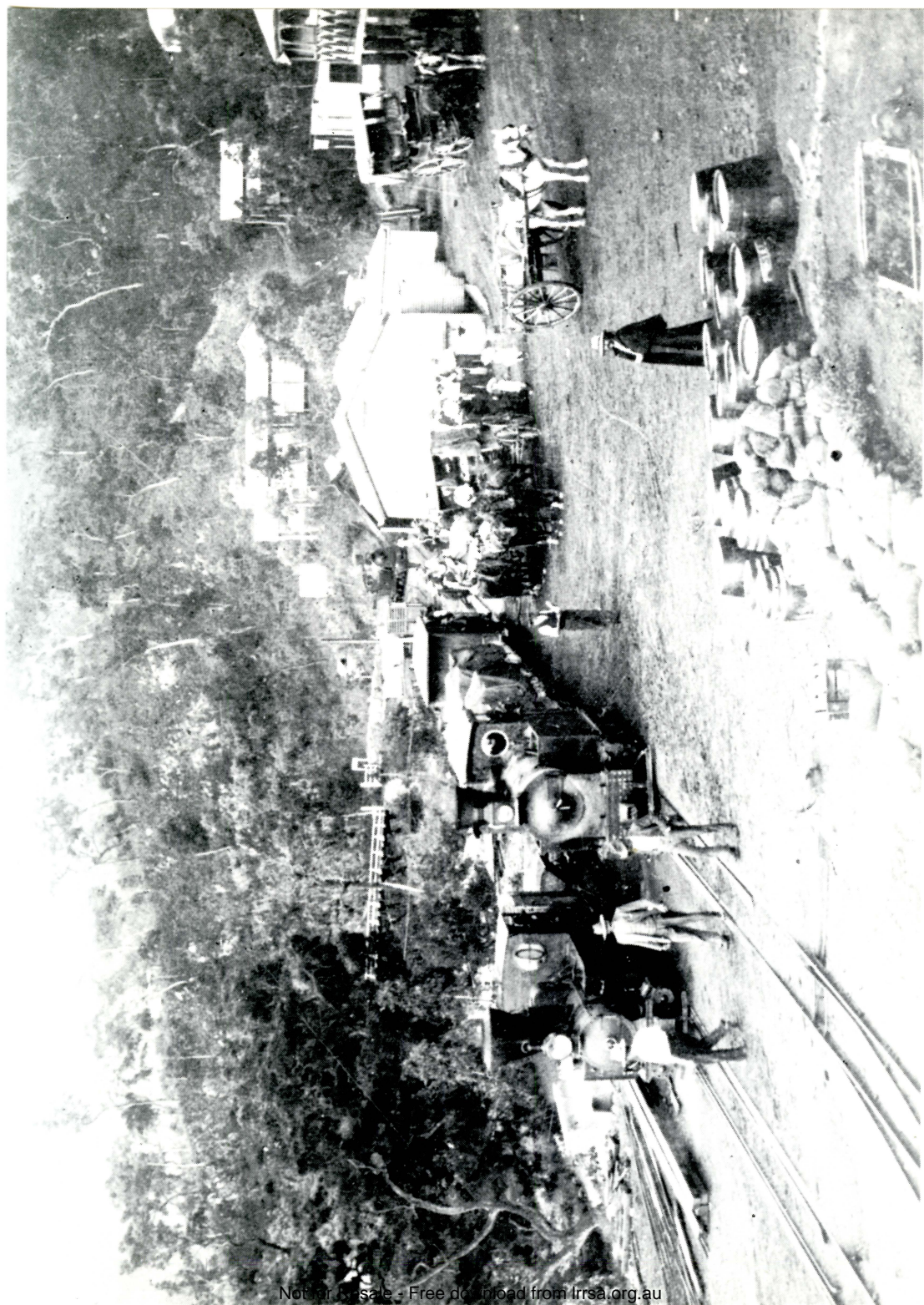
The Tramways Today

This area is well off the beaten track, and most roads are atrocious, although certain stretches are being upgraded now that small time mining is developing. Intending visitors should be well equipped, preferably in a party, with first aid kit, good shoes, long trousers or leggings, plenty of water and food as you are miles from anywhere; and rope, as in some places rock fall has come over the formation, and it is necessary to negotiate a section of steep mountain side. A lamp may come in handy to visit some of the diggings.



Old John, Irvinebank No. 3 0-6-2T crosses Gibbs Creek, near Irvinebank in 1914.

Photo: G. Bond collection



The following is a description of several visits made to the tramway since Easter 1968. At Irvinebank there is still a small population, as the treatment plant is still working for "tin scratchers" in the area. Ed Hancox and I found the old station building and a timber framed bogie, but the changes over the years had obliterated any signs where the lines had been. Being Easter, most of the people seemed to have left the place so we could not find out anything that way either. Later examination of photographs showed that we had been at the very end of the line.

On 4 May 1968 we set out to visit Stannary Hills. At Hale's Siding we soon picked up the formation from the road, and came to a 20 ft deep cutting and an embankment. We thought this to be Yorkie's Cutting. We found some dog spikes, the metal of which was in excellent condition after about 70 years, the climate being very dry of course. We also noticed that they must have had experts on the hammer, as the spikes showed hardly a sign of being hit, only a mark where the foot of the rail had rubbed against the spike. Further on we found spikes by the hundreds in similar condition.

The line veered away and we continued along the road until we came to a miner's camp, which we took to be Stannary Hills. After unsuccessfully searching for the tramway we found a man who told us that this place was called Stannary Hills, but that the original place was some miles away and more westerly.

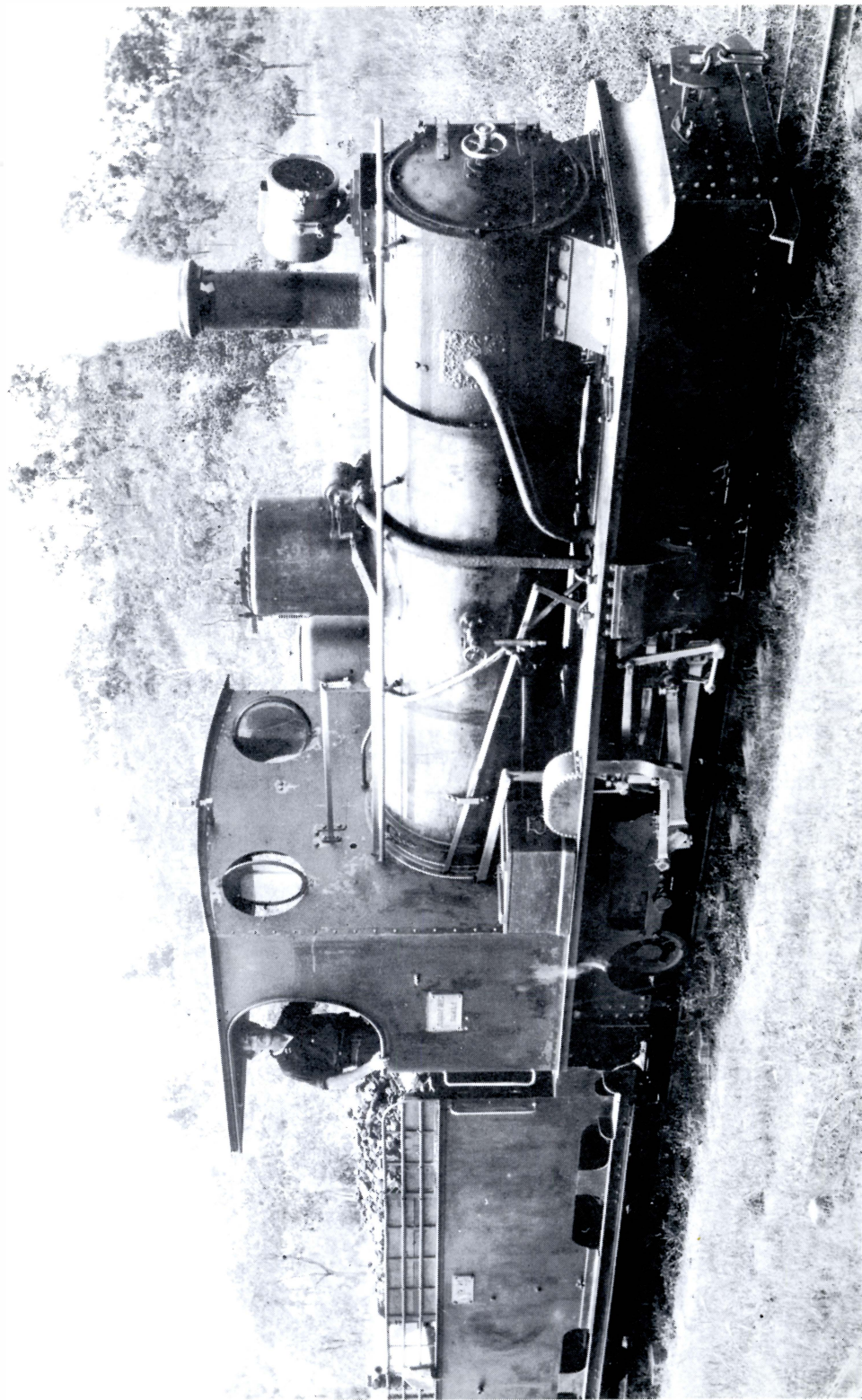
We followed a road which we took to be in the direction of the old tram line, and after some miles the country became more open, and I noticed remnants of tank stands. We pulled up on a sidetrack to camp for the night. As we were making camp a man appeared, and after we had explained what we were after, he told us that we were not very far away from the site of the Stannary Hills railway station.

The next morning, he pointed out to us the site of the railway station, and the directions to various old mines. This once busy town Stannary Hills, is now an open spot in the bush, and indeed the man we saw was the only man living here. Only a raised platform remains at the station site, and we started to follow the formation towards Boonmoo. A few trestles of the Eureka Creek bridge are still standing. From here the valley narrows, the tramway formation being on the left bank of the Eureka Creek (looking towards Boonmoo), and in the steep hillside on the left of the tramway we saw a large mining complex — Eclipse Mine.

We then came to the site of the Ivanhoe Mines, and many relics were found here — old flywheels, mineshafts, concrete foundations, and a dam in the creek bed. Lying around here and there were hoppers made by "Arthur Koppel, Berlin".

Opposite: Stannary Hills, circa 1910, looking towards Boonmoo. The locomotives in the foreground are, on the left, *Betty* — a Krauss 0-6-0T (B/No. 5261 of 1905) owned by the Irvinebank Tramway; and on the right, a Brush 2-6-0T of the Stannary Hills Mines and Tramway Co. Ltd. In the background is another Brush 2-6-0T of the Stannary Hills Company.

Photo: G. Bond collection



Stannary Hills locomotive No. 4 *Germany*, a Borsig 4-4-2 locomotive built about 1907, photographed at Boonmoo in 1922.

Photo: G. Bond collection

The formation follows the Creek in a most spectacular way for a few miles in the narrow valley. At some places it goes for a few chains on a ledge hacked out of solid rock. In other places it had to go through deep and narrow cuttings. We found a branch to what we took to be the Kitchener Mine. There was much rail lying about here, all still in pretty good condition considering that it was rolled in 1901 and 1902 by AHAV, whoever that was. The latter part of the branch had a different type of spike used, much smaller than was found on the tramway, and was presumably laid by the mine. Apart from what looked like a set of locomotive bogie wheels we found sets of wagon wheels, a Continental skip of 60 cm gauge and the chassis of a four-wheel truck made by "Koppel" of Berlin. But for the smashed axle-boxes it was in a beautiful state of preservation. One set of wheels was 60 cm gauge (1 ft 11 $\frac{5}{8}$ in) and the other set was 2 ft gauge. It was fitted with a ball lever brake. We also found the components of a bogie truck, of which we managed to salvage the link and pin buffer with its spring pocket.

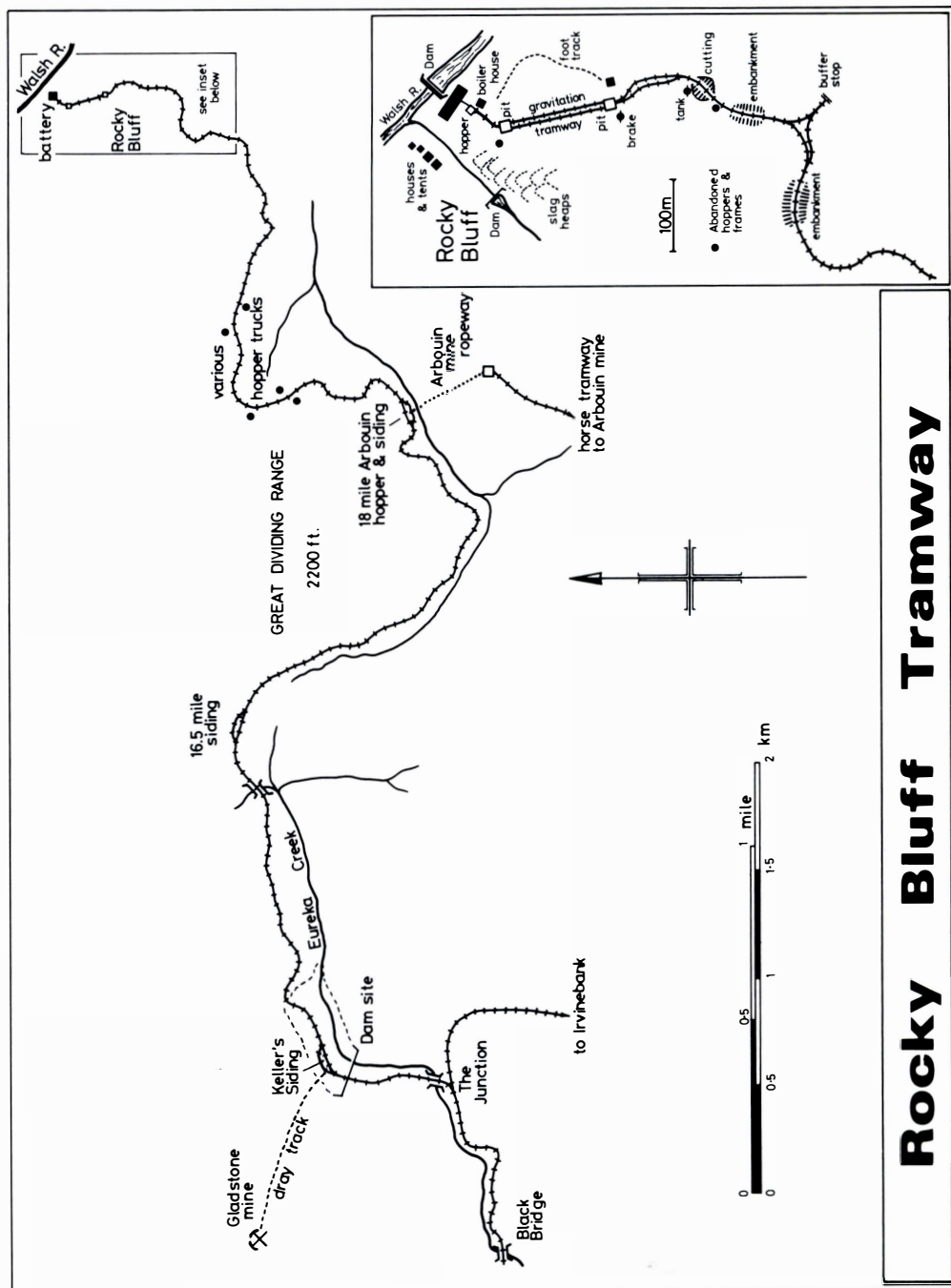
On another visit to Stannary Hills station site I had a look over the workshops site. I found hardware for wagons, like corner straps, etc., aplenty. A set of locomotive driving wheels was also found in the creek bed, and these have been recovered by Mike Loveday, with the help of Mareeba Boy Scouts and the permission of the Mines Department. With the aid of tackle the Scouts hauled the set of wheels up the bank and on to Mike's truck. They also recovered a new smokebox front at the site of the Irvinebank locomotive shed.

To Rocky Bluff . . .

For some years I have been attracted by the fact that no roads lead to Rocky Bluff. As the tramway to the smelters at Rocky Bluff had been pulled up in 1926 I imagined that the formation would be hard to find and in any case heavily overgrown.

When an opportunity arose to make this hike on Boxing Day 1969, we (a nephew and I) went well prepared. In the event we need not have worried, there was hardly any growth on the formation and it was fairly easy to follow.

We picked up the formation of the Stannary Hills to Irvinebank tramway below Loloma mining camp, which seems to me to be located on the old football and picnic ground of "The Junction", as I found the junction of the tramways right behind it. The formation to Rocky Bluff branches off to the north across Eureka creek, and after going through a few cuttings we came to a countryside completely routed up by open cast mining, effectively obliterating any signs of the formation. Bordering this area and in the general direction of the tramway was a large dam. My ordnance map's contours showed that the tramway formation went through this dam, so we decided to circle it on the eastern side heading north until we found the formation again. We drove along a miners' track which went in that direction, until it petered out near some diggings. We then went on foot across a creek which fed into the head of the dam. We immediately picked up the formation again, now heading in a general easterly direction.



Rocky Bluff Tramway

Gladstone Mine Siding must be somewhere under the waters of the dam. For a short distance the formation follows one of the headwater creeks that feed into Eureka Creek via the dam, and hugs the hillside with a shallow cutting here and there. The bridges are all gone on this formation and one has to cross the rather deep run-offs from the hillside into this creek. At the third such crossing (from the head of the dam) we saw signs of a siding near where the bridge had been, after which the formation went into a cutting. The top of this cutting was littered with bottles of a rather large type with a bottom akin to a champagne bottle. The formation gains height along the hillside and in a few places is hacked out of rock with the creek far below.

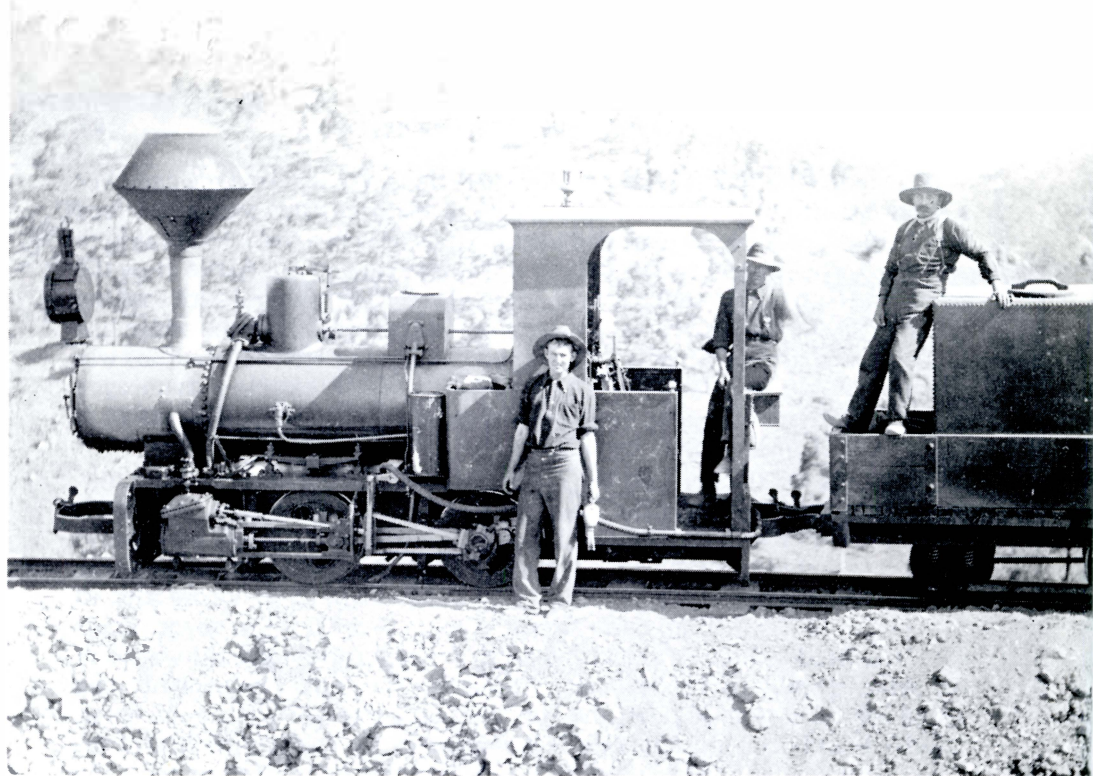
The formation then crosses the divide between Eureka creek and the tributaries of the Walsh river. The countryside is very hilly and steep, open bush and very quiet. The divide is crossed through a heavy rock cutting. We came to the site of Arbouin Mine Siding, 18 miles from Boonmoo and put in on 31 March 1906. There was a lot of ironwork lying about here from the ore bins, all the woodwork having been burnt. Heavy bolts and nuts, hinges, hopper doors with long handles remained, and above the formation was the tension gear of the aerial ropeway that existed here. The heavy steel cable, once 600 ft long across the creek, snaked down the very steep side and half way up the other. Level with us but on the other side of the valley we saw a large iron wheel of the ropeway and halfway to our right we noticed a formation we thought to be the one mile horse tramway to the Arbouin Mine, which fed the hoppers we were examining.

The creek valley is very deep and the slopes are a little less than perpendicular, so anyone wanting to explore this might do well to come well equipped and be prepared to stay for the night, as it seemed to me that a trip along that horse tramway would take the best part of a day. At Arbouin Mine Siding we found the only piece of rail along our whole hike — it measured 3 in high, $2\frac{3}{4}$ in over the foot and $1\frac{1}{2}$ in over the head. (This would probably be about 28 lbs per yard — Editor.) A solitary hopper without a frame made by Arthur Koppel, Berlin and a lot of dog spikes completed the scene.

From here to Rocky Bluff the going was exceptionally easy, although in short patches there was some sort of waist high growth. We had to cross three more gullies, one of which was fairly difficult. Altogether we saw seven hopper wagons lying beside the formation, their load of tin ore spilt beside it. Six had brakes activated by a side lever, they were all sprung, with wooden frames and link and pin couplings. Some wheels were lying about, and one was marked "JUNES AND SONS ADELAIDE SA STEEL". The hoppers themselves were made by Arthur Koppel, Berlin, and measured 5 ft x 5 ft x 3 ft deep. We also found a steel underframe with a ball lever brake. This had axle boxes marked 01087.

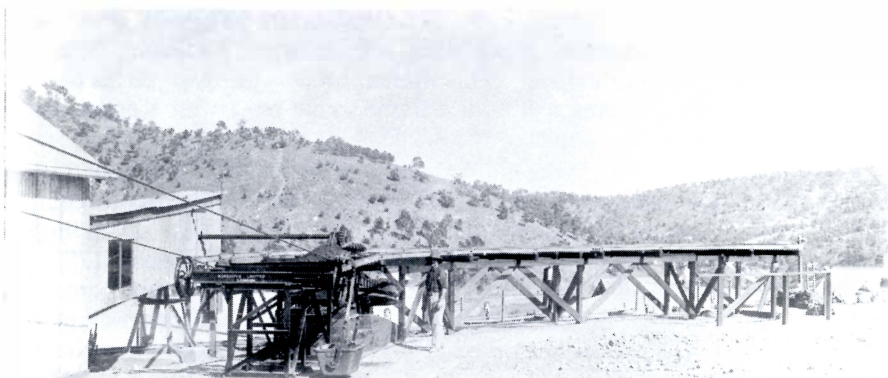
Rocky Bluff

Coming to the head of the Walsh River valley the formation runs across a few embankments which had been made very neatly with stones, somewhat akin to



Above: *Baby*, Irvinebank No. 2 0-4-0WT near Irvinebank in 1907. Driver — Bob Bliss, fireman — Jack Brougham, guard — Jim Cifuentes. *Photo: G. Bond collection*

Below: Unloading station on the Governor Norman mine cableway at Irvinebank in 1913. *Photo: G. Bond collection*



what one sees in pictures of the Welsh Tallylyn railway. The countryside now gradually opens out. The formation becomes double track and curves to the left (see diagram, p. 44). The right hand track then curves away and forms one leg of a triangle, being about 30 yards long. At the apex is a dead-end about 40 yards long with a timber buffer stop, no doubt to prevent anything crashing down the valley into the Walsh River deep down below. I could not see whether there had been a crossover in the double line near the triangle, but one is inclined to think that this is obvious. After the triangle the line continues as a single line, curving to the right across an embankment and then entering a low cutting. A small wooden frame of a four-wheel truck was lying here.

On top of the cutting is a tank stand, and some ashes lying about made me think that this was "loco" at Rocky Bluff. After the cutting the line turned left and became double. At the end of the curve both lines turned sharply to the right over a pit, with remnants of the hauling gear of the funicular. The wheels of the hauling gear were marked "Smellie & Co. Brisbane". A hopper was lying at the top of the incline. To the right of the pit was a concrete foundation, of the engine house I presume.

The incline is double track all the way and I estimated at about 45 degrees, the steel rope was still lying there. At intervals it had wooden cable-guide-rollers with steel axles. The incline goes down a considerable distance — I thought about 300 to 400 feet. At the bottom was a concrete pit with a small hopper lying nearby. We held on to the cable going down the incline. To the right of the pit at the bottom of the incline, and still lower down at various levels, were the remains of the smelters, consisting of large foundations of ovens, stacks, and many large round structures, like tanks with paddles in them. In the Walsh River there is a dam below the works. The houses we had seen in a picture were all gone. A formation ran for a hundred yards or so from the bottom of the smelters to a slag dump. I managed to carry a cable-guide-roller back with me, but I was heartily sick of the thing by the time I got back to the utility.

Working the Incline

After this trip I had the good fortune to meet in Cairns Mike O'Calaghan and Frank Calaghan (no relationship). Mike had been a Shire Clerk of the Walsh Shire, when it still had its head office at Irvinebank. Frank had worked at the Rocky Bluff smelter for some years, and told me how the incline tramway worked.

It was called a gravitation tramway, with one car on each track. These cars were balanced by a steel rope via a huge wheel at the top, where a man worked the handbrake. Trucks of ore, firewood or supplies for the smelter, were pushed on to a sort of turntable at the top, the truck then being pushed onto whichever car was at the top of the incline. Meanwhile at the bottom an empty truck was being moved onto the car there. At the signal from the bottom, the brake was released and the car started its journey down. At the bottom, the truck ran onto a turntable and over a high trestle to a hopper, to be emptied and returned to the car on the incline. The smelter, although worked by steam, was originally intended to be worked by water power from the Walsh River, hence its location.

Disposal of Irvinebank Tramway Parts

Mr M. Loveday, former driver and maintenance fitter of the Douglas Shire Tramway, informs me that during the second world war the Douglas Shire Tramway bought ironwork from the Irvinebank tramway for £50. This consisted of approximately 18 diamond frame bogies, also Fox pressed steel bogies, wooden frame bogies, bogies of a pattern used on the QGR, a frame of a passenger car, and couplings.

It was noted then that wheels were set at either 2 ft gauge or the continental 60 cm (1 ft 11⁵/₈ in) gauge. In the latter case the flange received a weld which was ground to make the set fit for 2 ft gauge. Shipping costs of this material to Port Douglas were £150.

Some of this material is still in use at Mossman Mill, the Port Douglas tramway having ceased operations in 1959, and the rolling stock was taken by that sugar mill.

References and Acknowledgements

Papers, timetables and correspondence from Mr A. F. Waddell, in the possession of G. Bond.

Plan and Section of the Stannary Hills Tramway, signed by Charles I. Stephens, B.E., Assoc.M. Inst. C.E., Cairns, north Queensland.

Mines and Lands Department Maps.

Ordnance Survey Maps.

The Stannary Hills and Irvinebank Mining Tramways of North Queensland by G. Bond, in Bulletin No. 302, December 1962, of The Australian Railway Historical Society.

The track layout of Boonmoo was copied by E. Hancox from a drawing obtained from the Queensland Government Railways.

In compiling the other track layouts I examined photographs held by Mr G. Bond, using various magnifying devices for the results.



Irvinebank 2 foot gauge tramway locomotive No. 3 *Old John*, an Avonside 0-6-2T built in 1907.

Photo: G. Bond collection