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REPORT ON THE FORESTER GOLDFIELD

LOCATION AND ACCESS

The Forester Goldfield is situated in the north-eastern part of Tasmania immediately to the north of the Forester Closer Settlement which is ten miles distant in a north-easterly direction from the township of Scottsdale.

Scottsdale is situated on the North-Eastern Railway from Launceston to Herrick, being distant 47 miles from Launceston, with which it is also connected by a good road. A fair road, 12 miles long, is the only means of communication between Forester and Scottsdale, and the mines are connected with Forester by a poor road, 3 miles in length.

TOPOGRAPHY

The district is generally one of moderately high relief. The most elevated country is that formed by Mt. Horror, approximately 2000 feet above sea-level, whilst the least elevated occurs along the Great Forester River at 100 feet above sea-level. Many streams have their source within the district and the prominent ridges formed as a result, and which act as watersheds between the stream systems, have an average altitude between 600 and 800 feet above sea-level. The whole of the drainage is into streams flowing into Bass Strait. The Sheepwash Creek and Tomahawk River rise in the northern portion of the district and flow north into Bass Strait. Numerous tributaries of the Pearly Brook rise in the southern portion of the district and join the parent stream which itself flows into the Great Forester River to the east of the district.

The surface of the district, where the underlying rocks are slates and sandstones, supports a very fair growth of stringy-gums, and to a less extent stringy-bark trees. These are utilised in the timber milling industry which is carried on in the district, and also provide a good supply of mining timber. The summit of Mt. Horror supports a growth of myrtle trees but which do not attain any great size. The poor soil overlying the granite supports a growth of small peppermint, and, to a less extent, white gum trees.

GEOLOGY

The district is composed almost entirely of two rock formations, viz. an old sedimentary series of slates and sandstones, and granite.

Cambro-Ordovician Slates and Sandstones

The slate and sandstone series occupies a tract of country about 3½ miles in width which has a trend from north-west to south-east, and is bounded by granite on the north-east and south-west sides. Towards the north-west this belt is probably continuous with the slates and sandstones of the Waterhouse Goldfield. Towards the south-east the belt of slates and sandstones has a greater width owing to the fact that they are overlying the granite and form the

summit of Mt. Horror. Towards the south-east this sedimentary series is probably continuous with that which occurs in the Warrentina Goldfield to the south-east. In the Linton district this series consists of alternating beds of slates and sandstones. The slates are light to dark grey in colour, and are generally thinly bedded. The sandstones are light-coloured, fine to medium grained types. These rocks have been subjected to extensive earth-movements since their deposition, and are now highly inclined. The strike of the beds varies from 0° to 40° west of north, but it is generally from 10° to 20° west of north. The dip of the beds is to the west or south-west at high angles up to 90°.

This series of slates and sandstones is similar to that occurring at other localities on the north-east and east coast of Tasmania, and which is regarded as being of Cambro-Ordovician age. No organic remains have been obtained from this series, and a more definite determination of their age is therefore impossible. In general lithological and structural features this series resembles the Ordovician of Victoria, but the absence of graptolites precludes any such correlation.

The series has been intruded by granite and near the contacts the slates and sandstones have been altered by contact metamorphism. The metamorphic zone is generally about a quarter of a mile wide, though its width is sometimes greater. In this zone the slates have been altered to spotted slates and mica schists, the spotted slates representing the lesser effect of the metamorphism and being the most numerous rock type produced. The sandstones have been altered to quartzites and hornfels.

Granite

This rock occurs to the east and the west of the district. Fresh samples prove it to be a white, medium- to coarse-grained rock composed of quartz, felspar and biotite. The felspar is white and plagioclase predominates over orthoclase. On Trig. Hill the granite is somewhat porphyritic and large crystals of plagioclase are prominent. Along the Pearly Brook small veins of aplite and coarse felspar veins occur, while dark fine-grained patches containing much biotite are visible. This rock type is very similar to the grano-diorite (quartz, plagioclase in excess of orthoclase, and biotite) which occurs plentifully in Victoria. Field relations and the alteration of the Cambro-Ordovician series at the contact prove the grano-diorite to be intrusive into that series. Around Scottsdale the granite is covered by Tertiary basalt flows. The age of the granite is, therefore, post-Cambro-Ordovician and Pre-Tertiary. No more definite age can be assigned to the granite on the evidence in this district, but in correlation with similar granites in Tasmania and Victoria, it must be regarded as Devonian in age.

Tertiary

In the north-eastern portion of the district the surface is covered with quartz grit and gravel, and also a number of water-worn pebbles of quartz and quartzite. Towards the south these deposits pass insensibly into the quartz grit which overlies the granite, but towards the north the gravels and waterworn pebble deposits are probably continuous with the Tertiary deposits which fringe the North-East Coast.

Recent

River alluvium and gravels are forming a few localities along the courses of some of the streams of the district.

ECONOMIC GEOLOGY

The gold lodes of the Linton district occur in the belt of Cambro-Ordovician slates and sandstones bounded on the north-east and south-west by the granodiorite intrusions.

The lodes are of the quartz-arsenopyrite-gold type. The quartz varies in colour from milk-white to dark grey. Arsenopyrite is the most plentiful sulphide and it occurs as small masses throughout the quartz. Pyrite is the next sulphide in order of abundance, but it occurs to a much less extent than the arsenopyrite. Its occurrence in the quartz is very erratic and it occurs more plentifully in the containing slates. Galena and sphalerite (zinc blende) occur to only a very small extent. The gold exists in the lode as free gold in the quartz, and also in association with the sulphides. The gold is extremely fine and only occasionally can it be detected in the quartz. Silver is also present, the ratio of gold to silver varying from 3:1 to 1:1.5. This silver is alloyed with the gold which is, therefore, rather pale in colour.

The lodes have a general east and west strike which however varies from 40° to 110°. Dips both to the north and south occur, and while no general rule applies to the district, the dip seems to be characteristic of certain portions of the district. Thus at the Linton mine, the dips of the main lodes and veins are to the north, while at the Mt. Horror Mine the dips are to the south and south-east.

As the strike of the slates and sandstones varies from 320° to 360° the lodes occupy fissures at right angles to the bedding planes. No evidence of faulting is visible in these fissures, and they represent narrow cross fractures in the strata.

The mineralising solutions were derived from the consolidation of the intruding magma from which the granite was formed. These solutions traversed the intruded slates and sandstones until the physical and chemical conditions were such that the quartz, sulphides and gold were deposited. The solutions travelled along the cross-fractures in which the conditions for deposition appear to have been more favorable for the veins and lodes than in other fractures. In the case of the Linton lodes the main channel appears to have been the "cross-course" from which the solutions entered the cross-fractures. The method of formation of the lodes was mainly one of replacement.

Granite outcrops both to the north-west and south-east of the slates and sandstones, and is probably continuous beneath them at no very great depth. Judging by the metamorphic zones visible on the surface, the lodes were formed slightly further outward from the granite than the metamorphic zone.

There is little or no zone of oxidation of the lodes near the present surface. Unoxidised sulphides occur in most of the lode outcrops without any oxidation products. This is due to the denudation of the surface proceeding as rapidly as the alteration of the superficial portions of the lodes. The primary zones thus come right to the surface and the lodes which are opened up near the surface are likely to maintain their characters to greater depths, and will suffer no great impoverishment such as occurs when the zones of oxidation and secondary enrichments are passed through.

THE LINTON PROSPECTING ASSOCIATION

The Linton Prospecting Association hold three leases - 59 P of 5 acres, 47 P of 19 acres, 50 P of 20 acres - taken up in the name of L.D. Edwards .

Gold-bearing quartz was first discovered on Lease 47P which was granted as a gold reward. Subsequent work revealed two small quartz lodes, and the underground workings have been carried out on this lease to develop these two lodes. These workings consist of two levels, No. 1 level giving up to 60 feet of "backs" and No. 2 giving up to 125 feet of "backs".

The No. 1 adit was started on the outcrops of No. 1 lode and was driven along it in a general westerly direction for 165 feet where the formation known as the "cross course" was met. From here a short drive was driven to the south-west, and another follows the "cross course" to the north. The drive along the "cross course" was turned slightly to the east of the "cross course" and intersected No. 2 lode at 167 feet. Drives both east and west are driven on the No.2 lode, that to the west passing through the "cross course".

The No. 2 adit was driven 600 feet in a general south-westerly direction. The track of No. 2 lode was cut at 300 feet and the No. 1 lode at 600 feet. A drive is now being driven to the west along No. 1 lode when a rise will be put up to connect with a winze from No. 1 adit.

The No. 1 Lode

On the surface, trenches and open cuts have exposed this lode along a length of 160 feet between the entrance of No. 1 adit and the cross course to the west. The lode had widths varying from 3 to 15 inches, the greatest width being shown in the open-cut. The strike varied from 250° to 277° and the dip was to the north at 70°. To the east of No. 1 adit, no prospecting work has been carried out and the lode has not been traced in that direction. The lode appears to end at the "cross course", although quartz has been exposed in several trenches to the west. At the head of a long trench in the "cross course" a short make of quartz has been exposed with a strike roughly parallel to that of the "cross course". On the west side of the "cross course" and approximately on the line of strike of No. 1 Lode, a lode 12 inches wide with a strike of 250° was exposed. Further west a 3-inch vein with a strike of 278° was cut in a trench. The only other exposure of quartz to the west was in a trench one chain west of the above, in which a narrow vein was cut. These three exposures to the west of the "cross course" are separate veins and the two latter cannot be regarded as the continuation of No. 1 lode.

In the No. 1 adit, the No. 1 lode has been followed from near the entrance to the footwall of the "cross course" - a distance of 165 feet. The width varies from 3 to 12 inches. A blank of 10 feet occurs east of the winze, but a vein goes into the footwall and quartz may exist behind the footwall. Two veins occur in the lode above the winze, but the one on the hanging wall side peters out before reaching the "cross course". The footwall vein continues to the western side of the "cross course" where it terminates in a vein going south on the footwall of the "cross course". The drive to the south-west was driven to pick up the continuation of the No. 1 lode which was believed to have been faulted by the "cross course". No quartz was cut in this drive.

A winze from the No. 1 adit to a depth of 20 feet revealed quartz all the way. At the time of the writer's visit a 15 inch formation in the east end, and a 24 inch formation in the west end, of the winze were showing.

The No. 2 adit cut the No. 1 lode at 600 feet from the entrance. On the east side of the adit the lode was 3 to 5 inches wide, and on the west somewhat wider. Driving west, the lode widened and was 12 inches wide at the face. The drive to the west is being extended and a rise will be put up to connect with the winze from the No. 1 level.

The following table gives assays of representative samples taken from the places specified.

Sample	Width	Gold			Silver		
		Ozs.	Dwts.	Grs.	Ozs.	Dwts.	Grs.
Open Cut	12"	4	4	22	2	1	20
East end of winze from No. 1 Adit	15"		Trace			Trace	
West end of winze from No. 1 Adit	24"	0	7	5	0	7	20
East end Lode No. 2 adit	6"	0	6	13	0	9	19
West end lode at face of drive off No. 2 adit	12"	1	1	13	0	14	9

A parcel of 3 tons taken from the open cut gave the following results - Battery 2 ozs., Concentrates 9 ozs., Tails 9 dwts. From these figures it is stated that the parcel bulked 2 to 2½ ozs.

The No. 2 Lode

The No. 2 Lode has been exposed on the surface by means of trenches for a length of 160 feet. The average strike is 250° and the dip is to the north at angles of 70°. The width is variable, the maximum being about 12 inches. At the most eastern point 12 inches of quartz is exposed in a trench along the lode, but no prospecting work has been carried out to locate it further to the east. To the west, the outcrop over a short distance is to the north of the

general strike. At the east side of the "cross-course" a rise from No. 1 level connects with the surface, the lode being followed in the rise. On the west side of the cross course a shaft has followed a vein of quartz down to the No. 1 level. The quartz veins in these two workings do not represent separate portions of a straight, continuous vein. There is an abrupt offset as though the vein was faulted at the "cross course", but it is reported that a track was visible connecting the two veins. On the western side of the shaft the lode is visible only in the upper portion. It is exposed on the surface for a short distance, but has not been traced further west.

In the No. 1 level the No. 2 lode has been driven on for a distance of 80 feet east from the "cross course". Quartz has been exposed on the footwall for 40 feet from the "cross course". No quartz is exposed in the next 40 feet and this probably corresponds to the blank along the general line of strike on the surface. On the surface, quartz occurs to the north, and it is possible that quartz exists to the north of the drive at the No. 1 level. Up to 6 inches of quartz occurs in the face of the drive and this probably corresponds to the lode exposed in the most easterly trench on the surface, the make of stone pitching to the west.

At the western end the No. 2 lode continues to the western wall of the "cross course". Two veins of quartz occur in the lode at this point and both pass naturally into veins in the "cross course" at right angles to the strike of the No. 2 lode. Neither vein in the "cross course" continues to the north side of the drive, but peter out in the back. The vein connected with the footwall vein of the lode passes into the south side of the drive for some short distance at least. A short drive to the north-west from the "cross course" drive connects with the shaft from the surface on the west side of the "cross course". A vein of quartz 12 inches wide occurs on the north-east side of the drive and will be found to be connected with the vein going south in the "cross course" from the south side of the drive on the No. 2 lode. This 12 inch vein does not appear on the south-west side of the short drive and peters out underfoot, but it is continuous up the shaft and appears on both ends near the surface.

The No. 2 lode was cut by the No. 2 adit at 300 feet. At this level only the track of the lode is exposed and it has not been driven on up till the present time.

A 6-inch sample from the east face of the drive on the No. 2 lode at No. 1 level gave the following assay:-

	Ozs.	Dwts.	Grs.
Gold	2	19	16
Silver	1	16	0

A 3 ton parcel from the two open cuts on east and west sides of the "cross course" respectively gave the following treatment results:- Battery 3 ozs., Concentrates 9½ ozs., Tails 9 dwts. It is stated that the parcel averaged 3 ozs.

No. 3 Lode

This lode is exposed in a shaft 300 feet south of No. 1 adit. The lode had a strike of 85° with a high dip to the north. The width in the shaft averaged 4 inches. A prospecting adit was driven to cut this lode at depth but although it was extended beyond the point where the lode should have been cut, no lode was exposed.

Other Lodes

Several other small lodes or veins occur in addition to the above. These are narrow veins of quartz which have been exposed at only one point, and on which no further work has been carried out.

The most important are those exposed in the No. 2 adit, where three veins were intersected between the No. 2 and No. 1 lodes. Of these the two nearer No. 2 lode are narrow, parallel veins with a general east and west strike and a southerly dip. The other vein is nearer No. 1 lode and dips to the north at angles of 50°-70°, and thus has a similar dip to that of Nos. 1 and 2 lodes. If these three veins persist in depth they must meet at shallow depths and probably combine to form one lode which will probably be a north-dipping one intermediate and parallel to Nos. 1 and 2 lodes.

The following table shows the assays of samples from two of the veins cut in No. 2 adit.

	Gold			Silver		
	Ozs.	Dwts.	Grs.	Ozs.	Dwts.	Grs.
North Dipping Vein	0	2	15	0	3	0
South Dipping Vein	Trace			Trace		

The "Cross Course"

An important feature of the Linton mine is the "cross course" which was believed to have faulted the lodes. This "cross course" is a soft slate formation about 4 feet wide with a strike of 255° and a high dip to the west. The strike and dip agree with those generally prevailing for the slates and sandstones, and this formation undoubtedly represents an interbedded band of slates. The Nos. 1 and 2 reefs continue right up to the western side of this formation and end in short veins running along the western side. These veins in the "cross course" connect with the small "makes" of quartz to the west of the "cross course". The lodes are not faulted but actually continue through the "cross course" although on the western side the makes of quartz are small and erratic. The "cross course", therefore, does not represent a post-lode fault, and there is no evidence to suggest pre-lode faulting although such may have occurred. In any case the term "cross course" is a misapplied one as the formation is an interbedded one. It has been used so much at the mine, however, that the term has been retained in this report for descriptive purposes, but where used, it is intended to signify the soft slate formation and nothing further. The origin of this formation

is due to this particular band of slates acting as one, if not the main channel for the mineralising solutions which formed the Linton lodes.

Reserves

Any estimation of reserves in narrow lodes like those developed in the Linton mine must necessarily be very approximate owing to the very variable widths which occur in such narrow lodes, and in considering the following figures, proper allowance must be given to these factors.

No. 1 lode	Above No. 1 Level	150 tons
	Between Nos. 1 and 2 Levels	250 "
No. 2 Lode	Above No. 1 Level	100 "
		500 tons

In addition to these, there are probable reserves in No. 2 lode between Nos. 1 and 2 levels. As regards reserves below No. 2 level these cannot be taken into consideration especially in the case of No. 2 lode until it has been driven on at No. 2 level.

Comclusions

The Linton Prospecting Association have carried out a fair amount of very economical and efficient prospecting and development work, which has resulted in the proving of two lodes down to depths of 130 feet. These lodes are narrow and vary in width from 2 to 24 inches, and the average does not greatly exceed 6 inches. The reserves developed are approximately 400 tons in the No. 1 lode down to No. 2 level, and 100 tons in No. 2 lode down to No. 1 level with further probable reserves as development work proceeds. The value of these reserves cannot be definitely stated without a thorough systematic sampling. The assays quoted above show how the value of the lode varies from point to point, values from a trace to over 4 ozs. of gold being obtained. From small parcels treated, it is stated that the one from No. 1 lode bulked 2 to 2½ ozs., and the one from No. 2 lode bulked 3 ozs. These are both from the open cuts on the surface. From the assays quoted above it would appear that there is a shallow secondarily enriched zone and that lower values exist at Nos. 1 and 2 levels. It is probable therefore that the lodes at these levels will bulk lower than the two parcels already treated.

With the existence of the above reserves, the question naturally arises as to the installation of a small treatment plant including battery, concentrating appliances, and cyanide plant. Second hand plant can probably be obtained at moderate cost and no great outlay of capital would be necessary. If the existing reserves could then be profitably treated, means would be provided to, at least, assist in the carrying out of further development and prospecting work, without the provision of extra capital for this purpose. As the future of the mine depends upon

the success or otherwise of prospecting and development works, this question of the erection of treatment plant is an important one. The quantity of reserves is small, so that it is essential that the value of the ore should be sufficient to render its treatment profitable. Before, therefore, a plant is purchased it is highly desirable from the Association's point of view that the lodes should be thoroughly sampled to ascertain the value of the ore reserves.

The question of future reserves, on which the success of the mine depends, can only be settled by further work. The No. 1 lode is going underfoot in the No. 2 level and should extend to some depth at least, but this can only be proved by further prospecting. Workings below the No. 2 level will have to be carried out by winzes or shafts with the attendant high costs for haulage and drainage.

From the present data available it would appear that no extensions of the lode of any length can be anticipated to the west of the "cross course". As regards extensions to the east, very little can be said. In the underground workings the lodes generally have the appearance of petering out in that direction, but this may be purely local. Neither surface nor underground work has been carried out immediately to the east of the mine, so that the lodes may continue in that direction and it is recommended that prospecting work be performed. The effect of the two soft slate formations exposed in No. 2 adit and which somewhat resemble the "cross course" cannot be foretold. The lodes may end against these formations, or pass through them, or other lodes may make to east of them as in the case of the "cross course".

As regards other lodes on the property, there is a distinct possibility of such being discovered. With the evidence available at present it is recommended that east-west lodes running east from the "cross course" be prospected for. Gold-bearing floaters have been obtained from the surface south of the huts and must have been shed from a lode or series of small veins in the vicinity of No. 3 lode, Further prospecting is justified in this locality.

The question of the identity of the Linton and the Mt. Horror lodes has naturally been raised. The two groups are 2000 to 2600 feet apart along the same general strike. It is improbable that such narrow lodes would be continuous over these distances. Also the more important Linton lodes dip north and the Mt. Horror lodes dip south. The two groups more likely represent a series of parallel lodes, discontinuous along their strike. The Mt. Horror lodes prove that gold and quartz have been deposited to the east of the Linton mine and that prospecting is justified in that direction.

MT. HORROR GOLD MINE

This mine is situated half a mile to the east-north-east of the Linton P.A. Mine. It includes the following leases:- 60 P of 10 acres, 57 P of 5 acres, 58 P of 5 acres, and 52 P of 10 acres - held under the name of V. Haley and others.

Three lodes have been revealed by surface works but only one of these has been opened up to any extent by underground workings. These workings consist of an adit 180 feet in length driven in a south-easterly direction, and a drive

along the lode both to the north-east and south-west. A rise on the lode connects the drive with the surface, while a winze has been sunk from the drive to a depth of 4 feet.

The No. 1 Lode

This lode outcrops on the northern part of Lease 58 P and has been opened up by the above underground workings. Its average strike is 40° and its dip to the south west is 70°. The width varies from 3 to 8 inches. The quartz is white to greyish and carries arsenopyrite and a little free gold.

It was exposed in one trench on the surface and also in the shaft which was later connected with the rise from the underground workings. In the top of this shaft 9 inches of quartz occurred and the quartz is stated to be continuous down the rise to the level below.

In the drive to the south-west a vein of quartz lying on the footwall was followed for 25 feet at a bearing of 225°, when the vein petered out. The drive was continued for a distance of 15 feet at 210° but no quartz was exposed.

The drive to the north-east followed a vein of quartz up to 8 inches in width bearing 55° for 20 feet and then 30° for 20 feet. The quartz petered out at this point, the drive being continued at a bearing of 55°.

Two samples from this level gave the following results:-

	Gold			Silver		
	Ozs.	Dwts.	Grs.	Ozs.	Dwts.	Grs.
No. 1 Sample	0	12	10	0	15	0
No. 2 "	0	4	22	0	1	15

No. 1 sample was a 5-inch one taken between the winze and the rise.

No. 2 sample was a 3-inch one taken north-east of the rise.

The winze was started to the north-east of the adit. Quartz (6 to 8 inches) occurred to a depth of 15 feet, where it petered out. At this point the footwall dipped at a steeper angle and only a "track" was visible. At 41 feet quartz was exposed in the north-east corner of the winze. A 4-inch vein made into the north-east end while a flat vein made into the footwall of the winze. These veins appeared to be independent of the No. 1 lode but further prospecting would reveal the relations.

The Intermediate Lode

This lode outcrops on the southern portion of Lease 52 P and to the north of No. 1 lode. The cap of this lode has been exposed in several trenches over a distance of approximately 150 feet, but no underground work has been carried out on it. The general strike of the lode is 60° with a high dip to the south. The width is varied, being generally about 3 to 6 inches, but in a shallow shaft to the north-east end, one foot of quartz was exposed.

Near the south-western end of the surface workings, another vein to the south of the Intermediate lode and between it and the No. 1 lode, is exposed in a long trench. This vein is striking at 40° and dipping to the south. It is 3 inches wide, but has not been located at any other place.

The No. 2 Lode

This lode has been located in the eastern part of Lease 60 P and crosses into Lease 53 P. Several trenches and shallow shafts have exposed this lode along a length of 150 feet. The average strike of the lode is 75° with a high dip to the south. The width varies from 3 to 8 inches. At the east end an adit 15 feet in length was driven at an angle of 190°. This intersected the lode at a shallow depth and exposed 6 inches of quartz with a strike of 75° and a dip of 60° to the south.

A sample from this vein gave the following assay results:-

Gold	Trace
Silver	Trace

Other Lodes

The only other vein so far exposed on this property is located near the north-west corner of Lease 52 P. A short trench exposed a small vein of quartz striking at 115°. An adit was driven to the west of the trench to intersect this vein, but although driven past the point where the vein should have been met, no quartz was exposed. It would appear that the vein is only a short one and does not extend as far as the adit.

Conclusions

Three main lodes have been exposed on the leases of the Mt. Horror Gold Mine leases by surface trenches and shallow shafts. Only a small amount of underground development work has been carried out on the lodes, and what little has been done has been devoted almost entirely to developing the No. 1 lode. The No. 2 lode has been cut by a shallow adit but has not been driven on. The intermediate lode has been exposed only in trenches and one shallow shaft. The lodes are all narrow with a maximum width of 12 inches, and an average width not exceeding 6 inches.

The only actual ore reserve which can be considered as developed is that in No. 1 lode where a maximum of about 200 tons has been proved by the present workings. The two samples taken in the drive give values of 12 dwts. and 5 dwts.

of gold respectively. A much greater number of samples would be required to determine the actual value of these reserves, but the above samples give some idea of the values to be expected. No actual reserves can be considered to exist in the other lodes until underground work has been performed on them. No reliable estimation of the values could be obtained by sampling the cap of the lodes, but the value of No. 2 lode where sampled at shallow depth is low, only a trace of gold and silver being present.

The mine is thus only in a prospecting and developmental stage. A much larger amount of underground work is required to prove the true values of the lodes.

The No. 1 and the Intermediate lode are only 200 feet apart and they could both be tested at greater depth by an adit driven in a south-easterly direction from a point to the north of the intermediate lode.

The No. 2 lode could also be developed by means of adits from the gully to the north of it.

The lodes as developed up till the present are narrow and the values as indicated by the above assays are small. An increase in both of the factors would be needed in order to make the mine a successful one. Narrow lodes are naturally liable to variation and whether the above conditions will be realised can only be proved by further underground prospecting and development work.

The question has naturally arisen as to whether the lodes on this property are continuations of those in the Linton P.A. Mine. The two groups of lodes are 2000 to 2600 feet apart on the same general line of strike but it is improbable that such narrow lodes are continuous over such distances. It is certain in any case that the lodes as numbered on the Mt. Horror sections do not correspond with the similarly numbered Linton lodes. Further the main Linton lodes (Nos. 1 and 2) dip northerly while the three Mt.Horror lodes dip to the south. The whole series of lodes more probably represent more or less parallel, but discontinuous lodes with a general strike varying from east-west to north-east - south-west.

FOREST KING GOLD MINE

These workings are situated on Lease 1546 G of 10 acres held under the name of R.A. McKimmie. This lease is east of and partly adjoining Lease 47 P on which the Linton P.A. Mine is situated. The westerly continuation of the Linton lodes was apparently sought on this lease, but only one trench (that near the hut) was cut which would cut any such continuation of these lodes. No quartz veins were cut in this trench.

The other workings are situated to the north-east of this trench. A long north and south trench has revealed a 3 inch vein of quartz striking at 30° and dipping at 30° to the north-west. A small amount of arsenopyrite and galena is associated with the quartz. A short trench to the north-east shows quartz on the dump but none is visible in this trench. To the north a shallow shaft has revealed a narrow formation with quartz veins. The formation has a strike of 70° and dips north at a low angle, and is distinct from the vein exposed in the other two trenches.

Two trenches and a shaft to the west and south-west have exposed no quartz veins.

The "cross course" or soft slate formation with which the Linton lodes are associated crosses the north-east corner of the Forest King section.

It is seen from the above that nothing of importance has so far been discovered on this section, the two veins exposed being very small. With the data available at present it is improbable that the Linton lodes extend to any distance west of the "cross course". It is very doubtful therefore as to whether any continuation of these lodes would cross the Forest King section.

BURROW'S SECTIONS

Leases 55 P and 73 P are held under the name of W. Burrows, and are situated to the north-west of the Mt. Horror Sections.

A small amount of surface work consisting of trenches and shallow shafts has been carried out on these leases. Quartz veins have been exposed in two places. A short trench near the western boundary of 55 P has revealed 6 inches of quartz with a strike of 60° and a high dip to the south. As far as could be ascertained it has not been further exposed along the strike. In the southern portion of lease 55 P a 15-foot shaft has been sunk on a vein up to 3 inches in width with a strike of 60° and a dip of 80° to the south.

GENERAL CONCLUSIONS

The same geological conditions exist in the Forester district as in all the gold-fields of the North-East and East Coast districts of Tasmania, viz. folded Cambro-Ordovician slates and sandstones intruded by Devonian granodiorite or granite. The conditions are, therefore, such that gold lodes may be expected to occur in this district. Numerous lodes have been discovered in recent years, but they have been proved, as far as present evidence goes, to be narrow and of no great lateral extent. Of these lodes the most important are the No. 1 and No. 2 lodes in the Linton P.A. Mine. Reserves are small, but prospecting and development work are proceeding, and the question of the erection of a small treatment plant is being discussed. Three lodes have been exposed on the Mt. Horror leases, but underground workings have been carried out on only one of these lodes.

Although the results have been somewhat disappointing, prospecting should not be abandoned. The belt of Cambro-Ordovician slates and sandstones is undoubtedly continuous with that of the Lyndhurst or Waterhouse Goldfield 9 miles to the north-west, where several lodes were discovered in the year 1869 although not operated with success. Also this belt is continuous with that of the Warrentina Goldfield to the south-east where lodes have been worked but with no great success. Thus there is a long tract of country in which gold lodes are known to occur, and though all the

lodes so far discovered are small the existence of otherwise of larger and more important lodes can only be ascertained by further prospecting work in the slates and sandstones.

(Signed) P.B. Nye

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