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RIO TINTO ORE DEPOSITS
REPORT FOR PERIOD TO 11/DEC/26

Rio Tinto Ore Deposits Rept. Period to 11-12-26

26-033

588

Tasmania.

December 11th, 1926.

Messrs. Hoskins Iron & Steel Co. Ltd.,
LITHGOW. N.S.W.

Dear Sirs,

RIO TINTO ORE DEPOSITS - TASMANIAREPORT FOR PERIOD TO 11th DECEMBER 1926.

ORE OCCURRENCE: The ore occurs in a series of lenticular lodes, running more or less parallel and intersected by seams of clay or decomposed rock.

The iron occurs as magnetite, hematite, Pyrrhotite and iron pyrites with some secondary limonite. The ore lodes are contained in a belt of metamorphosed gabbro amphibolite.

OPERATIONS: Actual trenching and tunnelling operations started on Monday 25th October, so that to date there has been seven weeks work on the present investigations. Some time elapsed during the obtaining and arrival of men and supplies, the erection of camps and the starting up. Prior to this date a few men were employed on trenching and tunnelling.

Work completed on the present investigation:

Trenches covered by jumper holes 4978': Cost per foot 1/4.

Also deepening of parts of original trenches.

Jumper Holes	84	
Tunnelling	163'	Cost per foot 25/6
Tunnel Approaches	136'	
Sinking	97'	Cost per foot 44/3 Including Windlass erection.

NOTE: (The shaft sinking to date was done in comparatively dry weather; also the water got away while sinking in the broken surface ore. In solid ore, in wet weather, water would add to the cost.)

Five Shafts are equipped for sinking to a fair depth with windlasses and shaft covering.

TRENCHING: The Plans will shew the details of the prospecting done by trenching and jumper holes.

The ore shews on the surface as:-

1. Abrupt and strong outcrops.
2. Large loose roll iron.
3. Cemented roll iron
4. Irony soil.

001

PAGE 2.

Trenching exposed a small gravel in places that does not shew on the surface on account of the Soil covering it. These several classes of surface indication required extensive trenching and drilling and ultimate results proved, except where the ore actually outcropped as cliffs or bluffs, that the surface iron indication was almost valueless for estimation or even for an opinion of the deposits.

Trenching has defined to a certain extent some of the actual ore bodies from the roll iron denuded from the original outcrop, and also from the adjoining clay, but if sulphur is not a deterrent, more work is required at a depth before reliable figures can be obtained for tonnages to shew to what extent the denuded or roll iron still exists in place and which probably overlies country rock, although the sections exposed by trenching to date shew a big width of ore.

ROLL & CEMENT IRON: In places the roll and cement iron cover large widths and areas. These classes of surface iron were shewn by some trenches to exist practically as a shallow depth deposit on the lower levels of the areas and to be the result largely of denudation of narrow lodes which occur mostly on the Western fall of the main ridge which consists the centre of the main deposits on the leases. These narrow lodes offering less resistance to surface action, have shed a tremendous amount of lode iron which has become in places cemented together to form a hard surface crust, varying from a few inches up to 12' in depth, and giving the surface appearance of a more extensive deposit than actually exists.

To test the greater depths of cemented iron, some shaft sinking was done.

On Lease 9324. Trench No. 1 Extended, a hole was put down through a strong cemented surface, which after one foot of cement went into large size roll iron. At 10' depth the iron was completely cut out by clay and a jumper hole was put

002

PAGE 3.

down another 10' in clay. This cement iron with adjacent roll iron and irony soil extended over a width of 270' and trenching exposed only a 6' lode of iron over this distance of comparatively strong surface iron indications.

IRON SOIL: This class of surface iron was again deceptive.

Jumper holes were used mainly on this class of material, but deeper trenching was required in places.

The main lode zone shewn in section of Trench No.3, Lease 9324 was covered by irony soil with no bluff outcrop whatever - practically no roll iron. In the majority of cases the irony soil simply overlay the country rock or clay.

The other extreme to the roll and cement iron overlaying the clay was shewn by irony clay overlaying lode formation. This was practically shewn in trench No.5, Lease 9324, lower down than the big creek of clay that is shewn as being tested by jumper holes and short trenches on the section drawing. The clay from the higher level has weathered down following the denudation of the lodes and has largely covered the main lens of ore.

The occurrence of strong roll iron or irony soil also proved, particularly on trench No.4, Lease 9324, to overlie clay, which again was overlying ore formation. This section appeared a particularly solid ore formation, but deeper trenching exposed clay and led to further investigation which ultimately shewed the ore body to be extensively seamed by clay rock. Concurrent seams have not been exposed on the adjoining No.2 Trench on the same lease, but there is little doubt as to their existence. A hole was sunk 9' on what appeared to be the strike of the clay seams, but no clay was met with, but possibly the hole was not correctly placed.

As regards the possibility of clay underlying at depth in sections where the outcrop appears particularly strong, tunnelling would be required to definitely prove out the relation of the width of iron, or country rock if it does exist.

Reference to the Drawing Section of Trench No.1, Lease 9326,

PAGE 4.

will shew an apparently strong body of ore. This body of ore exists adjacent to the cliff outcrops into which No.3 tunnel was driven. The whole of the surface outcrop was a strong comb and cemented iron without the slightest indication of clay. The No. 3 Shaft to test the sulphur horizon was sunk practically in the middle of this ore body, and a band of what appears to be country rock was met with at 15'6". The shaft is down 17'6", having passed through 1" of cement on the surface and then 14'6" of large size disjointed boulder formation with sedimentary clay deposited on the crevices and then the 2' depth of schistose rock comes in and is in the sink at present. This formation then clearly indicates the extensive detrital formation of the surface iron on a larger scale, as compared to the surface deposit proved out by the trenching, and shows what little value could be placed on the mere surface indication of the deposit.

Trenching proved the existence of up to seven different lodes on a section. The lodes vary in width, as do also the clay seams from 5' up to widths as detailed on the drawing sections.

Jumper holes were largely used in the trench work to eliminate as much as possible deep or unnecessary trenching.

TUNNELLING: Two shafts were immediately started on this work on Nos. 2 and 3 Tunnels and this method of work was carried on until Thursday 25th November when the miners available were put on to the shaft sinking.

No. 2 Tunnel: Lease 9324. This Tunnel was continued from 241' to 331'. What was considered to be an outcrop starting a wide body of ore on the surface did not continue so the driving has been mostly in barren ground.

A make of mixed ore was in the face at 241' shewing small seams of iron pyrites. At 251' a fairly defined seam of soft magnetite and hematite with pyrites came in and continued to 272' when a clean cut seam of clay made & continued on to 326' when mixed ore shewed again. Clean ore appeared to be making at the present fact 331' when the driving was stopped and shaft

004

work proceeded with.

The country in the drive is a fairly soft clay rock consisting of silicates of iron, lime alumina and magnesia. A sample of the ore in the face was forwarded for analyses.

No.3 Tunnel Lease 9326: This Tunnel was started direct into a cliff iron out crop. Sulphur shewed throughout the drive, but driving was continued to test out the class of deposit under a surface depression. As sulphur continued to shew at 20' No.4 tunnel approach was started on Nov. 2nd.

The ore in No. 3 Tunnel has shewn excessive sulphur throughout and two small seams of distinctly pyritic ore were cut.

The ore appears to be mostly primary.

In the existing face a clay seam has caused a break and two distinct classes of ore are shewing, the ore in the back appearing to be low in sulphur.

Samples of the top and middle of the drive have been forwarded for assay.

It was particularly noticeable that the ore from this tunnel was friable and a large proportion of fines was made.

No.4 Tunnel: Lease 9324. This tunnel was started at the bottom of No.1 trench on this lease and is 40' above and 80' South of No.3 Tunnel. The approach work was carried out on day work, and passed through roll and cemented iron to the fact. Actual underground ore has not been broken, but with a 12' face lode formation is shewing in the toe.

No.5 Tunnel Lease 9324: On No.3 Trench. Owing to the aspect of sulphur occurrence this tunnel was planned to test the sulphur depth, and was placed to cut the main lens or lenses that occurred on the highest section of ore deposit on the Southern Leases. The approach work was started on November 11th but when tunnelling was stopped the ore had not been reached.

No.6 Tunnel Lease 9317: was also started to prove the minimum of economically workable backs of oxidised ore on the Northern Leases. It was placed in about the centre of the ore deposit, at about the peak height and on the steepest fall from the ridge. The approach was started on November 19th, but not

005

much work was done when tunnelling was stopped to start the shaft sinking.

SINKING: Originally sinking was started to prove out what was under some of the different classes of surface formation. The hole sunk on the cement on No.1 Extension Trench has been described. A shaft was sunk on the ridge of No.1 original Trench Lease 9324, through small roll iron which shewed in the trench between what appeared to be two defined lodes with a clay seam and roll iron sections between them. This shaft made almost immediately into large size angular boulders with sedimentary clay in the crevices. It is down 17' and is on a partly cemented lyamted iron with no sulphur visible, but water is now holding so that it is close to underlying clay or solid lode.

On Thursday November 25th shaft sinking was started to prove the sulphur horizon. The time has been short to date to obtain definite results throughout. Four Shafts were started, windlasses rigged, and covering erected. The shafts are therefore equipped for sinking to a fair depth if required.

No.1 Shaft: Lease 9324: On Trench No.4 marked "C" on Plan approximately in the centre of the main lens, towards the Northern end of the main Southern Ore Bodies.

The Shaft went through Boulder Iron to 8' after a cemented top, when irony soil came in for 1'6" to a depth of 9'6" when a distinct 3' layer of sedimentary clay to 12'6" when ore was again struck, having been previously tested by a jumper hole. There was an indication of Sulphur at 15' but it disappeared, but the last shot fired in the shaft exposed a distinct make of primary ore which is highly sulphidic, at a depth of 18'. A sample is being brought forward for assay and examination.

The irregularities of the deposit were noticeable. The cement out crop, then angular boulders followed by irony soil, and then 3' of clay at depth under the iron. The clay was distinctly Sedimentary so it may be an infiltration, but by

006

its depth and flat bedded formation, it appears that the iron soil and big boulder denudations were subsequent to it. It may be just a local occurrence, but this class of Siliceous deposit, if occurring throughout the ore bodies would greatly depreciate their value. The same also applies to the Sedimentary Clay occurrence in the joints of the large size angular boulders, some 3" to 4" wide and 5' distance in from the boulder face. The shaft is wet and is on the primary ore lode.

No.2 Shaft Lease 9324: On Trench No.3, Marked "F" on Plan. Approximately in the centre of the main ore lens and towards the middle of the main Southern ore bodies.

This Shaft has been sunk all through small and large size boulders some waterworn small sized pebbles shew on the bottom. There is a 3" crevice seam of sedimentary clay in the sink. The shaft is still in the boulder formation and is dry. A sample of the cleaner iron, and one of iron adjacent to the clay are being brought forward for assay.

Depth 14'.

No.3 Shaft Lease 9326: On trench No.1, marked "H" on Plan, approximately in the centre of the main section of the ore and towards the Southern end of the main Southern ore bodies.

This shaft has already been described in discussing the possibility of country rock underlying at depth an apparently strong body of ore.

A sample of the clean boulder ore near the bottom is being brought forward for assay and also a specimen sample of the country rock make.

Depth 17'

The shaft is wet and is either on a permanent depth rock seam or near the compact lode.

No.1 Shaft North Lease 9316: On the Trench on the crest of the main ridge that runs at about the same altitude through the 3 centre leases, and is approximately in the centre of the main ore bodies of the North

007

PAGE 8

The shaft went through a cemented top which appeared solid but which made into a layer of very large sized angular boulders. This formation only went to 6' depth and smaller iron, clean with worn pebbles and soil continued to 10'. From 10' to 16' the ore was very dirty. The crevices of all the iron ore were filled with clay sediment and on one end there was a clean face of clay for 5' above the bottom with small sized irony grit through it.

Depth 16'

Shaft wet - close to compact lode or else water is held by the clay in crevices.

SUMMARY: Shaft sinking. This work has shewn some rather extraordinary developments.

Nos. 1 and 3 South and No. 1 North were started on a solid surface of cemented iron ore. They made quickly into large disjointed angular boulders, then at a depth of about 10' in the case of No.1 South and No.1 North sedimentary clay shews, and is quite a proportion of the deposit locally at this depth.

It appears that subsequent to the breaking down of the lode capping, the denuding clay from higher ground has washed down through the crevices and is overlying the solid primary lode, or the country rock on which the detrital iron lies.

In the case of No.1 Shaft after the clay bed, primary ore comes in and made into distinct lode sulphide in a few feet.

In the case of No.3 Shaft, as far as the shallow depth can indicate, it appears that larger detrital iron may spread over the surface and overlies actual barren country rock, but which from a surface appearance a section would shew a large lode formation.

No.2 Shaft was clean angular boulder with some worn pebbles but is shewing sedimentary clay in the bottom.

The Shaft on No.1 Trench Lease 9327 also had the sedimentary clay present but was not as dirty as Nos. 1 and 3 South and No.1 North.

The ore appears free from sulphur down to the depth where the

008

PAGE 9.

surface water has been passing through. If this class of more or less loose boulder formation attained any good depth, of course it would be an excellent proposition as far as the mining was concerned providing the clayey material was not excessive, but the development on No. 1 Shaft, along with the tunnel results shews distinctly unfavourably.

SULPHUR OCCURRENCE: There is no doubt that the actual lode is of sulphidic character.

In addition to the results obtained in the Company's workings, examination of the dumps from two old tunnels driven 15' above the Savage River in the Company's lease 9322, of a Tunnel driven to a lode on an adjacent hill just outside the 1922 lease and of a tunnel about 1/3rd to 1/2 a mile north of the Company's leases shewed ore of a definitely pyritic nature.

In the case of the far Northern Tunnel the ridge was at a level of 1420' and the tunnel 120' below. The peak altitude is the same as that on the ridge on the Northern Leases.

Sulphur is also noticeable on outcrops throughout the Company's leases.

Geologically, the ore deposit is due mainly to magmatic segregation as suggested by the Government Geologist and which appears probable, then the quantity of ore suitable for treatment will depend on how far the thorough oxidation has gone down and results and observations indicate that the depth will be shallow. I am strongly of the opinion that it will not go much further, than the depth of the detrital or broken ore. The actual depth may vary but it appears certain that there would be no extension bench work for open cut mining, but rather a skimming off of the detrital iron where it has been broken down by denudation and weathering and has become oxidised in contact with percolating waters.

I consider that the actual lode deposits will be sulphidic throughout and particularly where there are cliff formations, that there will be less available oxidised iron owing to the dense character of the primary ore.

009

RECOMMENDATIONS: The proposition cannot yet be called completed as regards prospecting work. Further developments are required before a final decision as regards available oxidised ore can be arrived at, as there is no doubt that the deposit is fairly extensive.

For future work I submit the following suggestions for your consideration:-

DRIVING:

1. Continuation of No.2 Tunnel. This tunnel has been driven towards a wide section of surface ore. Practically all dead driving has been done and the ore bodies are close; ore is in the face now. This tunnel will test ore varying in height of backs from approximately 80' to 120' and will also show the relation of the main ore lodes and clay seams.

2. Continuation of No.3 Tunnel for a short distance. The face shews a low sulphur of sulphur free ore in the back through sulphide ore is also in the face.

The face is now under a surface depression and has just passed a seam of clay a few inches thick, which may be a break in the class of ore deposit. A few feet driving will suffice this tunnel.

SINKING:

The Shaft work was done in a very limited time, as it was on November 25th that sinking was started to test the sulphur horizon, so that more work is required.

No.1 Shaft has just touched sulphide. This shaft should be continued for a few feet for clean definition of the class of ore.

No.2 Shaft continuation to a defined Zone.

No.3 Shaft. The sink appears to be in a country rock seam No.4 Tunnel is ready for immediate driving - the next holes will be breaking underground ore and being on the same section line as the shaft, if continued, will probably define the break into sulphide, if any, cheaper and more quickly than a new shaft in this area. There will be approximately 45' of backs from the tunnel to the bottom of the shaft now sunk, and 95' to drive to

010

PAGE 11

it, but if the sulphide exists relative to the surface contour the drive will cut it before this length of drive is put in.

No.1 Shaft North: Continuation to a defined zone. The ridge on the Northern areas that covers the main ore deposit is practically the same altitude so that one shaft will give first data as regards the sulphur horizon.

GENERAL:

If sulphur is shewn not to exist at a depth economically workable then No.5 and No.6 tunnels should be continued and also other tunnelling be done to prove the actual tonnages.

Trenching has shewn the deposit to be seamed extensively with clay breaks, but it is impossible to estimate the tonnages on figures available from surface developments.

Particularly on the Northern Leases is tunnelling required in preference to any more trenching. The surface of the trenches would indicate a larger section of ore but I consider that clay seams will break through what appears one big ore lens.

Contract drilling could be considered for testing the sulphur horizon more extensively, but for the present, windlasses, etc. are equipped for 5 shafts, and the gear could be moved to different sites very cheaply, and if sulphide is at a shallow depth quick results will be obtained.

Contract work on tunnelling and sinking would be adviseable. Plans are prepared.

Approximate estimates give the following tonnages:-

	<u>Depth.</u>	<u>Tons</u>	<u>Depth</u>	<u>Tons</u>	<u>Depth</u>	<u>Tons</u>
SOUTH	20'	1,120,000	40'	2,240,000	80'	4,480,000
NORTH	20'	718,000	40'	1,436,000	80'	2,872,000
<u>TOTAL</u>	<u>20'</u>	<u>1,838,000</u>	<u>40'</u>	<u>3,676,000</u>	<u>80'</u>	<u>7,352,000</u>

These figures are only an indication and cannot be taken for financial consideration as the depths of available ore are not known and also tunnelling is required to shew the actual sections of the ore lenses and clay seams at depth for they have not been clearly defined by the surface work and very little work has been done on the Northern areas.

A number of samples are in transit, the assay results can be appended for reference.

011

The rainfall has been excessive. There were 18 rainless days from September 26th to December 11th. These conditions somewhat retard the work and will affect the case of shaft sinking in solid ground.

All gear and supplies are ready for a resumption of work at short notice.

Yours faithfully,

(sgd.) E. Noel Goode.

19 Gellibrand Street,
ZEEHAN

September 6th 1926.

012

The Manager,
Hoskins Iron & Steel Co. Ltd.,
LITHGOW, N.S.W.

Dear Sir,

On September 2nd I notified my return from an inspection of the work done on the Rio Tinto Mines. The measurements have come to hand. On the 3rd inst. I posted to Lithgow 12 samples of iron taken from the various trenches at the Tinto.

Following is my report:

Section 9315 M. I will explain my method of examining each of the trenches. I commenced in Section 9315 M. 5 acres north of the Savage River, and at the west end of this trench. All my samples were very carefully taken. The first 40 feet along this trench was composed of large boulders of iron embedded in finer material (Iron) this would be No. 1 sample in this trench. No. 2 sample was taken from the next 90 feet in this trench across good looking and solid ore, very foamy, it appears to be going down solid and massive. I saw no pyrites in the ore of this trench. Length of trench 130 feet.

Section 9316 M, 5 acres. I commenced to sample on the Western fall or side of the hill. Trench No. 1. The first 50 feet of material thrown out of this trench for a depth of from 3 to 5 feet was first class looking Iron; underneath this loose or roll Iron the material appears to be mixed with considerable quantities of earthy matter (the enclosing Rock.).

This was not sampled. The next 30 feet looks to be solid lode, Blocky and Angular, of good quality going underfoot. This represents No.1 sample in this trench; the next 20 feet is composed of loose material of good quality. If time permit I have given instructions to have holes or shallow shafts sunk in the centre of the loose material in the trenches to ascertain whether this loose Ore is but shallow and dividing the hard bands or lodes of Ore.

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The next 230 feet appears to be from the blocky and stratified appearance of the bands and exposes in this trench a solid lode of Ore. No. 2 sample in this trench. The next 112 feet at the eastern end of this trench is composed of pebbly iron in most places cemented together but of good quality. I have given instructions to have a shaft or hole sunk at the end of this trench to a depth of about 10 feet to try and find out whether this loose iron is "roll" only. I have also given instructions to have a hole sunk at the western end of this trench to see what the ground is like. Length of this trench 442 feet. Section 9317 m. 5 acres. No. 1 trench commenced to. Sample at the east end of this trench. The first 30 feet is in solid Ore (Ridge). No. 1 Sample. The next 270 feet is nodular iron cemented together in places; the material looks to be of good quality. This trench is being continued in a westerly direction in good ore. No. 2 sample. Between this 9317 and 9316 sections there is a wall of iron from 5 to 10 feet in height exposed for some considerable distance. I think this will be what Mr. A.S. Hoskins was looking for when he was there with Mr. Westcott (The length of the last trench is 300 feet). Section 9323 M. 40 acres. South of Savage River Trench No. 1. This is the only sample taken from this Section. This trench is cut out to a depth of from 3 to 4 feet in loose iron having many large boulders associated with it. Trench 115 feet in length. sampled 85 feet. This trench is being continued in a westerly direction and about 50 feet north of a massive outcrop of good looking ore over 20 feet in height, a little to the south of this trench on course of the lode the hill rises rapidly. Length of trench 115 feet. Section 9324M. 30 acres. Trench No. 1 west end of trench. Sampled 85 feet in length in what appears to be a solid and massive lode of iron, depth of trench from 2 feet in places to 4 feet. The iron in this trench is exposed in layers of various thicknesses 2 feet and upwards. The next 65 feet is in loose iron. The quality of the iron is similar to No. 1 Sample. Next measurement 23 feet in clay. 4th measurement 'Ridge' of 57 feet of iron, in places it is exposed on the surface, in two or three places the loose

014

iron extends to a depth of 2 feet lying on solid ore.

No.2 sample. 5th measurement 14 feet of clay rock. 6th measurement a narrow but solid band of iron 3 feet in thickness. 7th measurement 20 feet of clay rock. 8th measurement East end of Trench 30 feet of iron sampled, solid throughout, to the East of this trench this band of iron still continues, if time permit will be uncovered. Also at the west end of this trench where the band of iron appears to be much wider. Length of this trench 297 feet.

Section 9326 M. 12 acres. Trench No.1 commenced to sample at west end of this trench. The first 25 feet is solid bands of iron. Sample No. 1. This branch of iron still continues to the west and will be uncovered if time permit. 2nd measurement 56 feet in loose iron of first grade, it appears to me that this loose iron is lying on the solid lode at no great depth from the strike of a ridge of iron about 50 feet to the north of this trench which shows a face of ore fully 30 feet in height and is exposed for about 100 feet in length. This ridge of iron extends both north and south of this trench. This 56 feet of loose material is trenched to about 3 feet in depth and was not sampled. The ore is of similar grade to sample No.1 taken from this trench. 3rd measurement 248 feet in what appears from indications at bottom of this trench to be one continuous body of ore. Sample No.2 was taken from this exposure. This part of the trench is of various depths from surface exposures to two or three feet. 4th measurement 25 feet of decomposed clay Rock having small amounts of fine iron distributed through it. Length of this trench 354 feet. I have given instructions to have some of these trenches lengthened also to have holes sunk into the loose material to a depth that can be thrown out with a long handle shovel. I have depicted what I saw in as clear and lucid manner as I thought might enable you to make a mental view of what I have described as I see it myself.

To: Hoskins Iron & Steel Co.Ltd. LITHGOW 6th September, 1926

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It must be remembered that these trenches are being put across the lodes in the best looking places on the properties. It must also be remembered that the exposure of ore on the surface (about 200 feet wide) of the 40 acre Section at the extreme North of your original holdings is one of the best looking lodes you have in these properties, yet at a depth of 100 feet it is practically a pyritic lode. Every one of the iron lodes in this district that has had a tunnel put under them have proved to be pyritic without an exception. These exposures of ore that are being trenched are situated on the highest projections of the hills. Therefore, we can expect the oxide to penetrate to a greater depth than the lodes situated on the lower ground. A railway can be brought in close by these trenched lodes south of the Savage River. The sections North of the Savage River could be left in abeyance for some years and linked up by acquiring a few 5 acre sections. This would save you about £20,000. There would be a good many millions of tons of ore that could be removed from these southern properties. Also a good deal that is on Crown land close by the route of a railway. When you again visit these properties you could then make up your mind regarding my stated opinions about them. While I was examining a wide ridge of ore in Section 9327M 12 acres, I saw pyrites freely distributed through the ore. There looks to be wide occurrences of ore in this section also. I went down the River and pointed out where I wanted a track cut for you to examine the country during your visit. I am enclosing Plans showing the positions of the trenches and tunnels in your recently reduced areas at the Tinto. Tunnel No.1 at the North of the River is in 73 feet 68 feet in a Mullocky Iron some distance ahead an outcrop of iron from 20 to 30 feet high is exposed which is the objective. The enclosed 'photo' represents this outcrop of ore having two people on it.

Yours faithfully,
For: HOSKINS IRON & STEEL CO. LTD.

(sgd.) WM. THOMAS.

RIO TINTO,
TASMANIA.

Oct. 28th 1926.

Messrs. Hoskins Iron & Steel Co. Ltd.,
LITHGOW, N.S.W.

Dear Sirs,

RIO TINTO IRON ORE DEPOSITS, TASMANIA

Actual prospecting work has been greatly delayed through lack of labour.

From the period 13th inst. until 25th inst. labour was coming forward slowly and all that arrived was required for camp erection and for MR. S. M. Westcott's CORINNA trip.

An advertisement was inserted in the newspaper on 18th inst., and labour was then being made available during the ensuing week. Except for some broken time work on the tunnel practically no prospecting labour could be done on the leases until Monday, 25th inst. The position for labour is now quite satisfactory and trenching and tunnelling are going forward quickly. The distances and length of time between communications are factors that have mitigated against quick organisation for immediate results.

Work now in progress:-

SOUTHERN LEASES:

Lease 9323. Trench No. 2 on lease marked B. on plan, north of the existing No. 1 trench on the narrowing section of the line of lode.

Lease 9324. Trench No. 2 on lease, marked D. on plan, on line extending west from No. 2 tunnel.
No. 2 tunnel - driving - 2 shifts. Extension west of existing No. 1 trench on lease, marked E on plan.

Trench No. 3 on lease, marked F. on plan on line between existing No. 1 trench on this lease and existing No. 1 trench on lease 9326.

Lease 9326. No. 3 tunnel - driving. 2 shifts.

A charcoal burner is employed on contract.

The new prospecting work is in the initial stages, and

017

To: HOSKINS IRON & STEEL CO. LTD., LITHGOW. 28th Oct. 1926

no definite results are yet available.

Yours faithfully,

(Signed) E. NOEL GOODE.

Memo:- Mr. W. Thomas is at present in Rio Tinto, but leaves
for Zeehan for a short period on Tuesday, 2nd Novr.

E.N.G.

4th November 1926.

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HOSKINS IRON & STEEL CO. LTD.,
L I T H G O W.

Dear Sirs,

On the 29th instant I returned from Rio Tinto, Tasmania, where I have been engaged in survey work etc. in connection with the Ore deposits and possible railway routes.

I am now engaged in the preparation of drawings, estimates, etc. in this connection.

These, together with my report should go forward in about a weeks time.

Meanwhile I am advising roughly as to the position, and give some very rough estimates of tonnages and railway construction costs.

Please bear in mind that these figures are only intended to act as a very rough guide and no doubt will be severely altered in the report.

Also as soon as possible I will forward reports in connection with my visit to the B.H.P. Quarries at Ironknob, also at Devonport.

RIO TINTO DEPOSITS - NORTHERN LEASES. The existing work has been measured up and barometric heights taken.

This work has been confined to the main lense of Ore going through Leases Nos. 9315 to 9319.

Three trenches have been cut across this lense and from this limited amount of prospecting it would appear that the lense has a maximum width of 160', with a maximum length of 1800'.

019

To: HOSKINS IRON & STEEL CO. LTD. LITHGOW. 4th November 1926

Adjoining this lense of Ore, a considerable quantity of drift Iron has been exposed by the trenches. This Iron has been opened up to a depth of 8'.

For purpose of a preliminary estimate this drift Iron has been assumed to be 10' deep over an area shown by the existing trenches.

No tunnels have yet been put into this lense and in the absence of same I am unable to say if the Ore is free from Sulphur at any specified depth.

For purposes of this preliminary estimate I have assumed two alternate conditions:-

- (a) The lense being free from Sulphur to a depth of 80' from the surface.
- (b) The lense being free from Sulphur to a depth of 120'.

Under the first assumption (a), giving 80' of backs, the estimated tonnage of available Ore including drift Iron now exposed, is reckoned to be in the proximity of 1,500,000 tons.

Under the assumption (b) with 120' of backs, available tonnage estimated at 2,250,000 tons.

All the Ore exposed by the trenches is a good grade hematite and by analyses taken previously by Mr. Thomas, was found to have an average Iron content of approx. 63%, with a very low Silica content.

SOUTHERN LEASES. A considerable amount of survey work was carried out on the leases Nos. 9323, 9324, 9326, which were considered to contain the main Ore supply on the deposit.

From prospecting work that had been done prior to these surveys, and from surface indications it would appear that the main lense was probably about 380' wide and with a maximum length of 2,700'.

To: HOSKINS IRON & STEEL CO. LTD. LITHGOW. 4th November, 1926

Unfortunately prospecting work has been held up due to shortage of labour, and only when I was leaving, was trenching going ahead to any extent.

The day prior to my leaving the deposit, a trench was put in across the lense near the South end of the lease No. 9323, and proved that what I had thought was a continuous lense of Ore 380' wide was considerably narrower than this, and contained a band of country 140' in width.

In view of this most unexpected development, I am not in a position to even give any rough estimate of Ore available here until the next Tinto report is to hand.

It would now appear that what I considered to be one lense with a width of 380' is made up of two separate lenses with a band of country about 140' in width separating them, although surface inspections gave no indication of this whatever.

The No. 2 Tunnel on the East side of Lease No. 9324 is about 13' in the Eastern side of what I consider to be the Eastern lense of three parallel Lenses on the Southern leases.

The tunnel face is at present approx. 70' directly below the surface at this point, and Sulphur is showing up to a considerable extent.

This tunnel when extended will be approx. 170' below the top of the main lense opposite this point.

No. 3 Tunnel Lease No. 9326 is 8' into the West side of the Western lense of the series, and at present the tunnel face is 50' below the surface, sulphur is also showing up here.

If this sulphur continues to occur, this tunnel is to be stopped and recommenced some 50' higher in elevation.

The No. 3 Tunnel level is 120' below the top of the main lense opposite this point.

Prospecting work is now going ahead well, and as soon as the next Tinto report is to hand the information will be put on the Plans that have been prepared and some idea of quantities should then be available.

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To: HOSKINS IRON & STEEL CO. LTD. LITHGOW. 4th November, 1926

Helios of this plan have been sent to Mr. Goode so that he can with each report forwarded, attach a print showing all developments to date.

RAILWAY ROUTES. The possibility of Railway routes was gone into and two routes appear to be possible :

- (a) Long Plains Route. Distance 22 miles.
Ruling Grades. 1 in 60 against the load.
1 in 45 with the load.
Estimated cost - £130,000/-/-.
- (b) Savage River Route. Distance 17 miles.
Ruling Grades. 1 in 200 against the load.
1 in 60 with the load.
Estimated cost - £160,000/-/-

The Long Plains route would appear to be preferable to the Savage River route, although the distance is 5 miles longer.

These estimates of cost are practically guess figures, and no doubt will be very severely altered in the report which should go forward in about a week's time.

Plans showing these two routes will also go forward with my report.

Yours faithfully,

(Sgd.) S. M. WESTCOTT.