

REPORTS
ON
DROSKYN & WHEAL RAMOTH
TIN MINES
CORNWALL

PERRANPORTH,

23rd May, 1912.

Sir.—The attached reports and drawings are descriptive of a large, and it is believed, a very valuable tin bearing property, known as Droskyn and Wheal Ramoth Mines.

These Mines were extensively worked in the early part of last century till about the year 1830, but only to shallow depths, and then became inactive, due to low price of the metal—inadequate machinery—and various other contributory causes though not by reason of impoverishment.

TITLE. The Mineral Rights are held from the Duchy of Cornwall under Grant by Annual License at a nominal rental, with certain stipulations concerning labour, pending the grant of a Lease for twenty-one years.

There are no questions that can arise in regard to title or tenure, which is practically in perpetuity. Licenses are invariably renewed when the moderate provisions imposed have been observed to the satisfaction of the Duchy advisers. The covenants conform with the Duchy Rights, but no difficulty need be entertained as to the renewal of Licenses or Leases by the Duchy, where the conditions of the grants have been reasonably complied with.

A Lease for 21 years will be granted as soon as a Company is formed with Capital sufficient to work the Mines on an extensive scale.

Mining Leases granted by the Duchy of Cornwall are renewable, without the imposition of any fine, or introducing any penalties, hence there is no special motive for seeking a lease for a longer period.

The dues payable under the existing License is 1,24th of the gross mineral product raised, but on the assurance of the Mines being worked on a comprehensive scale with adequate machinery, with proper representation it is understood the Duchy will reconsider the question of dues and reduce it to 1-30th.

CAPITALISATION. The proposal now is to form a Syndicate (called DROSKYN SYNDICATE, LIMITED) to acquire the Mineral Rights secured by the Grantee, and, first, to carry out the preliminary mining work set out in the annexed Supplementary Report, dated 15th June, 1911, at a cost of £6,000 (to which £1,000 is added to cover general expenditure), and upon its successful accomplishment, which should occupy no more than about 12 months, to form a strong Company called "DROSKYN AND WHEAL RAMOTH TIN MINES, LIMITED," to instal the requisite Mining and Ore Reduction plants, and to fully develop the mines, having a nominal Capital of, say, £118,000, of which £60,000 shall be set aside for Working Capital. A sum, it is confidently expected, sufficient to complete the equipment with the most modern and efficient machinery, and to place the Mines on a thorough sound working basis, making steady returns.

The Syndicate is to consist of 70 Shares of £100 each, payable £25 on application, £25 on allotment, and the balance in two calls of £25 each in three and six months from date of allotment.

The Syndicate will be the Vendors to the larger Company, and out of the new issue are to receive a return in cash of the £7,000 expended in mine development (the benefit of which will accrue to the New Company), also 50,000 fully paid £1 Shares, being equivalent to slightly more than seven free Shares for every £1 invested.

An Agreement will be entered into between the present Grantee from the Duchy and the Syndicate, transferring the License to the said Syndicate, on its undertaking to allot to him or his nominee 8,000 fully paid Shares in the DROSKYN AND WHEAL RAMOTH TIN MINES, LTD., when formed on the above capitalisation and working Capital, without further consideration.

The preliminary work of the Syndicate consists of clearing and unwatering Droskyn Engine Shaft, and then of extending the 40-fathom level laterally on the Main Lode E. and W. from the Shaft a total length of 500 feet or more ; also of proving the ore ground developed, by up-raises in the back of that level, which, by the evidence of the Lode were worked by the Ancients directly above this point, should lay open a very considerable amount of Ore Reserves of a highly payable character, establishing the basis for extensive mining operations.

The developments foreshadowed aggregate a lineal measurement of about 150 fathoms. Placing the average width of that portion of the Lode excavated at 5 feet only, the ore obtainable therefrom, calculating on 15 tons per fathom, is 2,250 tons ; and given a produce of 30 lbs. cassiterite per ton (considered a low estimate), the total contents amount to 30 tons of tin oxide, worth just now £120 per ton ; but allowing for market fluctuations, say an average of £100—£3,000, revenue derivable from this preliminary development work alone, less reduction and dressing charges.

MANAGEMENT. Messrs. John Taylor and Sons, of 6, Queen Street Place, London, E.C., have agreed to accept the management of the Syndicate, and to provide an efficient Secretary.

APPLICATION FOR SHARES. Should you decide to participate in this undertaking, please notify Mr. W. L. Bayley, of 6, Queen Street Place, London, E.C. (who will be the Secretary of the Syndicate) as to the number of Shares you are prepared to take. Application should be made early.

I am personally investing £700 in the Syndicate, equal to 10 per cent. of the required Capital.

I am, Sir,

Yours faithfully,

JAMES ROBERTS, M.Inst.M.M.

Droskyn & Wheal Ramoth Tin Mines.

The above Mines are contiguous, and the Main Lodes traverse both Setts. The situation is on the north coast of Cornwall, at Perranporth. in the Parish of Perranzabuloe. The accompanying Map shows the exact locality, and other information as to area, bearing, and underlie of the metalliferous veins, etc.

AREA. Originally the two mines were worked independently, and were taken up as separate concerns, but the Duchy of Cornwall owning the mineral, realising the great advantage of working it as one large property (including the Foreshore, which is likewise traversed by the same lodes), the whole area has been granted in one Mining Sett, comprising altogether about 450 acres, viz.:

Droskyn	...	...	...	180 acres.
Wheal Ramoth	...	...	...	170 acres.
Foreshore	...	...	...	100 acres.
Total Area	...	...	...	450 acres.

The extent of the Foreshore (coloured yellow on Plan) cannot be definitely determined, but it is certainly more than 100 acres. The Property, therefore, is of considerable size, and through it many lodes are known to trend.

TITLE. The Mineral Rights over the entire Property are held under License granted by the Duchy of Cornwall at a fixed annual rental, merging into dues returnable, equal to 1-24th of the mineral produced, besides certain working conditions. The License is preliminary to the granting of a Lease for 21 years (renewable) at similar dues, but with the stipulation that the Lessee, or Company formed, must put up sufficient working Capital.

HISTORY. The early history of these Mines is entirely lost ; the evidence however left by relics of ancient workings in the cliff face and on small islets which once formed part of the mainland, it is thought not improbable that mining here for tin dates back 2,000 years or more, to the days of the Phœnicians. The inroads of the sea, by breaking down to such an extent the hard rock composing these cliffs in which the workings penetrate, must of necessity have covered a long period, and we may assume the Mines, as they were above water-level, were more or less continuously worked by the "Old Men" until about a century ago, or, say, A.D. 1820. These are now classed Ancient Mines, as distinguished from the more recent work accomplished at both Ramoth and Droskyn.

At the latter Mine the old miners at two points, with the power derived from water-wheels to operate the pumps, succeeded in getting down about 60 feet vertically below the normal water level. The bringing in of the water a distance of two miles, for these wheels, entailed an enormous amount of labour, including about 700 feet of tunnelling, and sundry wood aqueducts. There is no one living now who worked there, but it will be observed Mr. John Hosking, who was employed at this mine some years later, states that his father worked there at this water-wheel period, and, further, that the Mine is a good one.

With regard to Wheal Ramoth, the "Old Men" worked it till about the year 1825. leaving (according to tradition) a valuable mine in the bottom, but with inadequate machinery the water influx beat them. A few years afterwards a new Engine Shaft was sunk a little to the north and east of the old Mine, an account of which is contained in a report by Capt. Richard Nancarrow dated 14th October, 1874, herewith. I can gather no information as to the cause of their ceasing work, seeing it is universally admitted the lode is a large and productive one in the bottom, but we know the price of tin in 1830 was very low, viz., £74 per ton, or only about a third of the present quotation for the metal ; then the water

charges were heavy, due to high cost of fuel and transport, crushing capacity limited to small water-driven Stamps situated at a distance, and the general conditions for working then were more costly than under existing circumstances.

GEOLOGY. Much has been written from time to time concerning the geology of this district, but that which perhaps has the greatest bearing from a mineralogical point is the occurrence of granite at Cligga Head, and the consequent metamorphism of the overlying slates. Also the existence of large elvan dykes, one of which is shown on the Plan, is particularly prominent. The presence of these elvan courses are favourable to the formation of large ore masses where the lodes come into contact with them, as was notably the case at the Budnick Mine, where Lode proved phenomenally rich in tin, and the elvan itself also was very productive in the same locality.

The change that has taken place among the stratified sedimentary rocks on approaching the granite mass is very marked, and is developed within an aureole. Mr. J. B. Scrivenor, F.G.S., in his official Geological Report, 1906, says :

“ In the Cligga aureole the first traces of spotting were found on the long stretch of sandy beach, near the Adit of Wheal Vlow. Thence towards Cotty's Point it becomes more and more defined, and on crossing the Porth the killas is found to be not only densely spotted, but bleached to a pale buff colour.”

The part of the Property last referred to is where Droskyn Mine is located; but throughout the entire length of the Sett, the change effected by the metamorphism of contact is observed, supporting the general view that the granite extends N.E. from Cligga Head into Droskyn Section. “ There is actual evidence of this in a report of the Perran St. George Mine, dated 1857, in which Capt. John R. Pill, the Manager, stated that apart from the exposure of the Cligga Head granite, the main body of the granite comes near the surface at a point at sea-level, three-quarters of a mile to the East.”

The point indicated reaches within 700 yards of Droskyn Engine Shaft, and as the surface of this main body of granite mentioned by Capt. Pill must be at about 300 feet lower elevation than the top of the Cligga exposure, it augurs that the granite will be met with at no considerable depth in the Droskyn Mine.

Mr. Scrivenor, continuing, says :—

“ Again, quite independently of the above testimony, it is possible to infer the presence of a large granite mass, either hidden by the killas, or denuded away by the sea, for the aureole of metamorphism affected by the igneous mass was found to be out of all proportion to the existing outcrop, and to point to a considerable mass to the north of Cligga Head. . . . By means of the aureole of metamorphism round the Cligga Head granite, the extent of the hidden portion of the mass can be deduced in such a manner as to corroborate the evidence afforded by the old mining report quoted above. The type of metamorphism is one, characteristic of the West of England, resulting in the production of tourmaline schist. . . .”

The close proximity of the granite and the evident mineralogical change that has occurred in the overlying killas, into which the heat of the granite radiated, is a highly important factor, and favourable to the production of large courses of mineral.

DROSKYN.

There are several lodes in this section of the Property (marked on Plan) but at present chief interest is centred on the Droskyn Main Lode, in conjunction with the St. Katherine Lode, the latter having an opposite underlie to the former, they should form a junction at a moderate depth. By the accompanying Cross-Section on line C—D, at the Eastern Point, it indicates where the said junction is likely to occur, approximately at the depth of 225 feet.

THE MAIN DROSKYN LODGE IS A VERY POWERFUL ONE, VARYING IN WIDTH FROM 10 TO 25 FEET, AND IT HAS IN GREAT PART BEEN EXTRACTED BY THE ANCIENTS, IN A LENGTH OF OVER 1,000 FEET, DOWN TO A LITTLE BELOW THE SEA SHORE;— BUT FROM THE NATURE OF THE WORK DONE ON IT EVIDENTLY THE RICH PORTION OF THE VEIN IS CONFINED TO 4 FEET WIDTH AND THIS HAS BEEN GOUGED OUT AS FAR DOWN AS POSSIBLE, THOUGH GENERALLY NOT MORE THAN 6 TO 10 FEET BELOW WATER LEVEL, EXCEPT WHERE THE WATER-WHEELS WERE EMPLOYED. THE STRIKE OF THE VEIN WESTWARD FROM THE ADIT IS S. 63 W., BUT TO THE EASTWARD IT TURNS MORE NORTHERLY, PROBABLY DUE TO THE INFLUENCE OF THE CAUNTER—THE BEARING THERE BEING N. 45 E., WHICH IT FOLLOWS FOR A LENGTH OF 300 FEET TO THE RIVER, AND IS THERE LOST TO VIEW. IT IS NOT POSSIBLE TO TELL WHETHER OR NOT IT MAINTAINS THAT COURSE AS FAR AS RAMOTH, BUT I AM RATHER OF THE OPINION THAT THE SPEEDWELL LODGE IN RAMOTH SECTION AND THE DROSKYN LODGE ARE IDENTICAL, CONFORMING IN DIP AND SOMEWHAT SIMILAR IN CHARACTER. THE COMBINED LENGTH OF THE WORKINGS ON THIS RUN WITHIN THE PROPERTY IS 4,800 FEET, OR CLOSE UPON ONE MILE.

THE MOST PERSISTENTLY WROUGHT PORTION OF THE VEIN IS ALONG THE FOOT OF THE CLIFF, EXTENDING FROM THE CROSS-COURSE CLOSE TO NO. 7 OLD SHAFT, AND REACHING TO THE EASTERN POINT AT NO. 1 OLD SHAFT, A DISTANCE OF 530 FEET. IN THIS STRETCH THE FOOTWALL OF THE LODGE PERTAINS TO ELVAN IN SOME MEASURE, BOTH IN NATURE AND APPEARANCE, THOUGH HIGHLY SILICEOUS. IT IS NOT USUAL FOR THE STRIKE AND DIP OF ELVAN-COURSES TO RUN PARALLEL AND CONTIGUOUS TO THE LODGE, BUT THERE HAVE BEEN INSTANCES IN THE COUNTY WHERE THE OCCURRENCE HAS HAD A MOST BENEFICIAL EFFECT IN THE PRODUCTION OF TIN FROM BOTH THE LODGE AND THE DYKE.

WESTWARD FROM THE CROSS-COURSE JUST MENTIONED THE LODGE IS MORE MASSIVE, AND IS COMPOSED CHIEFLY OF HARD QUARTZ, IMPREGNATED WITH MINERAL THROUGHOUT, AND SHOWS NICE CRYSTALS OF CASSITERITE IN PLACES, THOUGH ITS AVERAGE VALUE IS LOW.

ON WHAT IS CLAIMED TO BE THE EXTENSION OF THE ST. KATHERINE LODGE IN DROSKYN SECTION, THE ANCIENTS HAVE EXHAUSTED ALL THE ORE ABOVE THE BEACH LEVEL, RIGHT TO SURFACE TO THE TOP OF THE CLIFF, AND ACCESS TO THESE WORKINGS IS NOT POSSIBLE JUST NOW; HOWEVER, IT WOULD BE DESIRABLE TO EXTEND DROSKYN ADIT A FEW FEET FARTHER SOUTH TO INTERSECT THIS LODGE, SUPPOSING THE OLD MINERS DID NOT REACH SO FAR TO THE WEST.

OLD SHAFTS.

No. 1 Old Shaft is situated on Droskyn Eastern Point (see Cross-Section). It is in two compartments, 3 feet of ground dividing them, one probably was used for pumping and the other hoisting, an excavation having been cut out of the solid rock to take a 22-ft. dia. Water Wheel which operated the pumps. From the position of this shaft in relation to the lode, it evidently cut the lode with about 40 feet of sinking. In the neighbourhood of this Shaft it has always been spoken of as the richest part of the Mine. The power exerted by the Wheel would not exceed 10 horse, probably about 8-H.P., and as the periphery was within reach of the sea at high tide, there would be a few hours daily when the Wheel would be idle, hence we may calculate their workings could not have been extensive; nevertheless all the ore extracted was removed and stamped.

No. 2 Old Shaft is distant 50 feet west from No. 1, sunk close to the edge of the Cliff; it must have struck the lode a few feet only below the beach. About 26 years ago I saw the lode stripped directly opposite this Shaft, and it was rich in tin for the width exposed, viz., about 4 feet. Since then another party worked there for a limited time between tides, and with great difficulty extracted some tons of lodestuff that yielded, I am told, 1 cwt. of tin oxide to the ton. I recently made an attempt with a force of men to get down to the lode here from the beach, but failed to bottom, due to incoming water and running sand; but I do not think there is any doubt that the lode contains high grade ore all along these bottoms, from opposite No. 1 to No. 3 Shafts, and beyond, covering a length of 200 feet.

No. 3 Old Shaft is 44 feet west of No. 2, and, like the latter, was sunk near the cliff face, the adit measuring 15 feet only. In a small chamber cut into the east end of the Shaft at the adit, there is lodged about a ton of lodestuff, evidently

the last material extracted, and a sample taken of it gave by assay 70 lbs. of tin to the ton, which is fairly suggestive of what the lode is worth in this section.

Nos. 4 and 5 Old Shafts are located at Droskyn Adit, distant 185 feet on the line of the lode to the west of No. 3. Here again one Shaft evidently was used exclusively for pumping and the other for raising mineral. The second water wheel was fixed here; and judged by the dimensions of the opening cut out of the Cliff, the size of the Wheel was about 22 feet diameter, by 2 feet 3 inches wide, developing perhaps 10 to 12 horse power.

The dip of the Lode here is about 60 to 65 degrees from the horizon, south, and No. 5 Shaft probably tapped the vein at 75 feet vertical depth, No. 4 Shaft at 60 feet or thereabouts. Work apparently was vigorously carried on, although they must have experienced trouble with crude appliances and interruptions in the supply of water to the wheel, which was inevitable. What quantity of mineral that came out of these shafts there is no means of determining, but all of it was taken away and stamped, which we may be sure was not done at a loss.

Nos. 6 and 7 Old Shafts are 160 feet to the west of the Adit, and are sunk within 10 feet of each other; No. 7 is distant 36 feet horizontally from the Lode, which it probably intersected at the depth of 60 feet. What mechanical appliances were used is not known, likely a horse-whim. A sample of a 4 feet section of the Lode in a pillar at the entrance to the drive leading to these shafts, yielded by assay 23 lbs. of tin to the ton of ore, but the sample was scarcely representative, as undoubtedly the part worked by the Ancients gave a much higher product.

Remains of other ancient workings are noticeable still farther to the West, but owing to disintegration caused by weathering, and also by the action of the sea, the cliff has fallen away, taking with it much of these workings.

CAUNTER. Returning again to the Eastern Point (vide Cross-Section through line C—D), the "Caunter" is seen boldly exposed in the face of the cliff, distant 230 feet south from the Main Droskyn Lode. The strike of this Caunter is N. 74 W., Dip S. It cuts diagonally across the other lodes, is composed chiefly of quartz, more or less stained with iron oxide, and in appearance is not unlike a cross-course; generally it is sparingly mineralised, but in places, both within its walls and in the adjacent country rock, bunches of cassiterite have been found—one a few years ago at the foot of the cliff produced 12 cwts. of black tin from about 15 loads of stuff stamped.

STOCKWERK. Continuing south and lying between the "Caunter" and the St. Katherine Lode, is a large opening in the cliff exposing a network of veins that have been extensively mined by the Ancients, the surrounding ground being fairly honeycombed by their numerous small drivages, which now, however, are mostly choked with debris. There is a large quantity of tin-stuff available here, doubtless low grade, but with a Company owning a Stamp Mill it might pay to take away on a large scale.

SAINT KATHERINE LODGE (Droskyn Section). This Lode, which proved phenomenally rich in tin when worked in the Ramoth part of the Property, by its trend strikes into Droskyn as shown on the Cross-Section, a little to the south of the above-mentioned Stockwerk, with which the workings on St. Katherine Lode are connected underground, but it is not known to what extent the said Lode has been extracted on its course westward, hence the recommendation to drive the Droskyn Adit a short distance farther south to intersect it. The dip of the Lode is about 48 degrees North, towards the Droskyn Great Lode, with which it is expected to junction at the depth of forty fathoms, or less, on the cross sectional line C—D.

The veins comprised within the Stockwerk, likewise the Caunter, have importance, because it is considered they are "droppers," or feeders, to the St. Katherine Lode, which in turn may, and probably does, enrich the Main Droskyn Lode at or near their junction.

COPPER LODE. Proceeding south another 22 fathoms on the line of the Cross Section, is a vein lying exposed with a slight southern dip, considered to be copper bearing, but at the moment no importance is attached to it, as this report deals mainly with the tin mining proposition; however, I should add that at 150 fathoms still farther south is the Great St. George and Wheal Leisure Copper Lode, from which returns amounting to nearly £800,000 were made during the past working.

DROSKYN ENGINE SHAFT. This Shaft is marked on the Plan, and will be found in the vicinity of Nos. 4 and 5 Old Shafts.

About A.D. 1831, when the Copper Mines just mentioned were very productive, a local Company was formed to work Droskyn for copper, as being a south underlayer, like the Great St. George Lode, and trending approximately parallel, its mineral contents, it was thought, would change from tin to copper, the latter metal at the time commanding the higher price. It should be further explained that the copper and tin dues then were in the hands of different persons, and the Company only acquired the mining rights for copper.

An Engine House and a 36-inch Pumping Engine were erected, and the Shaft sunk vertically 40 fathoms, or 240ft., below Adit, making it altogether 300ft. from surface. A short cross-cut driven north from the bottom passed through the Lode, which is said to be several feet wide, compact and well defined, carrying appreciable values for tin. A few feet were driven upon it both E and W., but as it contained no copper of consequence the work was forthwith abandoned. The lodestuff extracted was dumped over the burrow mixed with gangue as there was no object in keeping it separate. Some years later, after a portion of the stuff extracted had been used for metalling the road in the vicinity, Mr. Thos. Mitchell a local recognised tinner (who is still alive) hired a water-stamps in the neighbouring valley of Perrancoombe and crushed the whole of the road material, as well as what remained on the mine burrow, which returned him a good profit in tin produced. Unfortunately in those days no strict account was kept of the tonnage crushed, nor the amount of tin obtained from any particular parcel of ore, which was being taken from different places on the neighbouring mines, but as far as his memory serves, the mixed lode and burrow stuff yielded not less than $\frac{1}{4}$ cwt. of tin oxide to the ton, and he believes it gave more. However, calculating on the lower figure, the ore from the lode, if crushed clean, would give a proportionately higher yield, possibly 40 lbs. per ton, and this appears to be the general impression.

Attached are reports on Droskyn by Capt. Josiah Thomas, late Manager of Dolcoath Mine; Capt. S. Bennetts, late Manager of Penhalls, Blue Hills, etc.; Capt. Richard Nancarrow, late Manager of Old Shepherds, West Chiverton, etc.; all noted mining men, and one by Mr. John Hosking, from his personal knowledge of the last working.

WHEAL DRAIN. Brief mention may be made of this section of Droskyn Sett, situate close to Gwythian Cove, to the west, from the fact that it was the site of extensive mining operations for tin carried on by the Ancients, and later by the Great St. George Company. From what I can gather, there is a considerable width of stanniferous ground in this old Mine, comprising many small lodes and leaders, traversing a soft killas formation, but only worked down to water level. Most of the workings now are inaccessible, but likely they could be re-opened at no great cost, though it is not suggested to do so until the other more important sections of this large property have been developed.

WHEAL RAMOTH.

By referring to the Plan, it will be observed that several lodes, trending almost parallel, and covering a surface width of about 1,500 feet, traverse this Sett. These include, amongst others, the Speedwell Lode, Ramoth Main Lode, Gordon's, and St. Katherine—all worked down to water level, and the Main Lode to 50 fathoms below Adit.

Two prominent Cross-courses, namely Cotty's and Byon, bearing N.W. and S.E. and about 1,100 feet apart, cut through all these lodes.

THE SPEEDWELL LODE underlies South, and has been worked continuously from near the line of Cotty's Cross-course, eastward to the boundary, and beyond into Wheal Vlow Sett. By its position, southern dip, and character of the ore, it is probably the extension of the Droskyn Main Lode, after displacement by the first named Cross-course.

THE RAMOTH MAIN LODE is distant about 400 feet to the south, and dips north, so that these two lodes should join on their underlie, probably at a point not far from the 50-fathom level.

The reports included with this contain all the information available concerning the past working. It seems the Mine closed down about 80 years ago, when they had a 60-inch Pumping Engine, but, as previously mentioned, no definite reason is forthcoming to show why work was suspended.

The Old Mine was carried on until, with bad shafts and defective machinery, at 40 fathoms depth they reached the limit of their power, but at the same time the Lode continued good in the bottom, sufficiently so to induce the erection of the larger Engine, and to sink the new Shaft; this, however, only got down 300 feet, or 60 feet deeper than the former workings, which were not tapped below the 20-fathom level. There is no evidence to indicate that the Lode depreciated in value with the last 60 feet of sinking; on the contrary, seeing that all the lodestuff was carted some distance and stamped. The fear of letting down a large volume of water suddenly from the Old Mine, and perhaps overcoming the pumps, seems a feasible reason.

THE ST. KATHERINE MINE, which is now included with Wheal Ramoth, was formerly in North Wheal Leisure Sett, and worked by a separate Company.

They put down two Shafts, marked A and B on Plan, and also drove a long Adit into the hill on the Lode, which proved exceedingly rich, and large returns of tin were made from it. I understand the depth of the Mine is only 10 fathoms under the Adit, and when driving west at a point near the line of the river at Ponsmere Bridge, the Lode was temporarily cut off by a "slide" (apparently Cotty's cross-course), and nothing further was done in that direction, though the Lode was of high grade where dislocated. About the same time, the adjoining Wheal Leisure Mine stopped pumping, and although the two Mines are not on the same lode, it is asserted that nevertheless it had the effect of considerably increasing the influx water in St. Katherine, which compelled them to cease operations. The sequel to this is probably Cotty's Cross-course, which cuts both lodes, and was the means of conveying the Wheal Leisure water to St. Katherine.

A Capt. Gripe later attempted to pick up the St. Katherine Lode about 600 feet further west, on the other side of the Cross-course, by sinking an iron-lined Shaft near the Foreshore, and he put up a small undershot water-wheel at the river near by, to operate the pumps, but he met with many difficulties and abandoned the attempt at shallow depth. The site selected by Cap. Gripe is, nevertheless, a good one for picking up this Lode, as on the projecting point of land opposite, there are ancient workings prosecuted on the back of it.

MITCHELL'S LODE. This small tin lode was located near the eastern boundary about 9 years ago by a party who were then also mining in the adjoining Budnick Sett. It is, doubtless, an extension of one of the other lodes already mentioned.

Under the superintendence of Mr. James Ellery, a shaft was sunk on it 90 feet, and short drives extended at 60 feet and at the bottom. The vein at that point is narrow, still about 30 tons of ore were raised that, on stamping, yielded an average of about 20 lbs. of tin per ton. The suspension of work here was due to the party (a private one) leaving the district.

There are other Lodes on the Property that have been opened in olden times but to describe them would needlessly burden this already lengthy report.

CONCLUSION.

It will be apparent on perusal of the foregoing, taken in conjunction with the plans and sections herewith, that the Property, though large, is traversed by a series of metalliferous veins extending practically over the whole area ; but those to which particular attention is now drawn, and which were the largest producers of tin in the past, are three in number, namely, Droskyn Lode, Ramoth Main Lode, and St. Katherine.

The St. Katherine Mine, as before stated, is quite shallow, and can be reopened at no great outlay when desired. No steam machinery was ever employed here, and whilst admitting the accuracy of the statement that the late workers were driven out by the incoming water, it likely was not of very great volume, and probably could be coped with by a small steam engine.

Wheal Ramoth is held in high esteem by all mining men in the district, who have had handed down to them the traditional accounts of its great riches unearthed in the past, and who persistently adhere to the fact that in the bottom of the Mine the Lode continues wide and valuable.

It is in evidence, and I think reliable, that the main Lode was driven upon and made good right up to Cotty's Cross-course, which dislocated it ; but it was never found on the opposite or west side of the Cross-course at either of the levels, hence it must have been "heaved" a considerable distance. The miners of this part are well acquainted by practical experience with the action of these displacements, and all are unanimous in their views that when again picked up on the west side of the Cross-course the Lode will be found of equal value as where last seen.

When this Mine is unwatered, I am of opinion a fair extent of profitable ore ground will be found intact in the existing levels, partly because lower grade ore will pay to work now with improved methods and machinery, but mainly judged by the fact that courses of ore were left by them even above the Adit, which have since been extracted at a profit, notwithstanding this is a very old Mine, having been worked for centuries.

A Cornish Pumping Engine of 70-inch diameter cylinder would be necessary in re-starting, to ensure effectual drainage, but I will refrain from entering into particulars regarding machinery, etc., for this Mine, as it is outside the present programme.

Droskyn, we may say, is virgin ground below Adit, for although a vigorous endeavour was made by the Ancients to mine at depth, with the crude mechanical appliances at their command they only succeeded in getting down about 10 fathoms at two points.

The labour and material expended in bringing water from a distance by ditch and tunnelling to supply the two Water Wheels employed, and the resolution shown by these old Miners in carrying out this preliminary work, which must have been considered of some magnitude, and the difficulties that had to be surmounted by mining in proximity to the sea shore, also during the summer months probably a lack of water to give the necessary power to the Wheels to keep the pumps going to their full capacity, and consequent periodical flooding, working conditions generally of a primitive order, we may with confidence calculate that the objective was worthy of such strenuous efforts, even with the price of Tin at £75 per ton, contrasting with over £200 now.

Apart from this, there is the striking evidence before us of the best portion of the Lode having been taken clean away down to, and a little below, the sea beach for a length of 500 feet, and in recent years the Lode has been found of high grade wherever these workings were bottomed.

Then we have the further evidence as to the character of the Lode at the depth of 40 fathoms in the cross-cut from the Engine Shaft ; for the reasons be-

fore explained, no definite record was kept giving its width and value, but sufficient is known to establish the payable character of the ore, whilst as regards quantity, the lode is so strong and masterly, possessing great width persistently for 1,000 feet at surface, that there is no room for doubt on that point.

Here then is a Mine with the Engine Shaft already down 40 fathoms, and the Lode only requiring the usual development drivages, etc., to lay open a body of ore reserves pending the installation of the Reduction Plant.

There is no possibility of defining, with any degree of accuracy, the amount of ore standing above the 40-fathom level, and any calculation made may as likely err one way as the other. However, it will be safe in giving the height of the "backs" 130 feet without tapping the old workings anywhere; in length 600 feet is pretty well assured on the recognised best section; as to the width of payable ore, say, an average of 5 feet.

Thus we have :—

130ft. x 600ft. x 5ft.—390 cubic feet @ 13 cu. ft.—30,000 tons.

I am inclined to believe this a conservative estimate, for it does not provide for the extension of values much beyond the Eastern Point towards Ramoth, nor ore from other lodes, notably the St. Katherine at its junction with the Main Droskyn Lode. It will be recognised also that the above only refers to developments down to the first level.

The proposal forward is first to equip this Section of the Property with the requisite Pumping, Winding, and Air Compressing Machinery, together with Workshops and Buildings, before entering into the question of unwatering Wheal Ramoth, not because that Mine is less worthy of development, but purely on the point of finance, as the equipment of both sections simultaneously would mean providing a large working Capital at the outset. So soon as Droskyn is brought into the paying stage, however, the position from a working standpoint will call for the re-opening of Ramoth, and to communicate the two Mines.

To enlarge, clear, and timber Droskyn Engine Shaft from surface to the 40-fathom level, cut plat and fix shoot. The draining of this Shaft can be done rapidly, but the enlarging and timbering will, of course, occupy some little time.

The erection of a 40 Stamp Mill and complete Ore Dressing Plant should be proceeded with after the underground developments at Droskyn are sufficiently advanced to ensure its utility. The mistake is sometimes made of pushing ahead with undue haste the Reduction Works, to the neglect of the Mining Department. Though in this instance I am confident there will be no occasion to defer the installation of the milling plant after the real exploitation of the Mine has commenced.

The estimate for providing the above equipment is £30,000, viz.:—

One 60-inch diameter Cornish Pumping Engine, complete with connections, boilers, and buildings, all erected	£4,300
Pitwork, 16in. diameter 2 lifts, with extra to surface, say 600 feet, rods, strapping plates and bolts, and fixing	£1,180
One Winding Engine, Capstan Engine, Ropes, etc., complete, Steel Headgear, erection of Plant, including Buildings	£1,800
Air Compressor and Plant complete, erected, Rock Rrills, Piping, etc.	£3,000
Houses and Workshops, fitted complete	£1,300
Stock of Material, tools, etc., including tramrails, wagons, and skips	£1,800
Pumping Station at River, to supply feed water to boilers	£250
Droskyn Engine Shaft, to enlarge (18ft. x 7ft.), and thoroughly timber, depth 300 feet (including the cutting of Plat and Shoot)	£930

40 Heads of Gravitation Stamps (each 1,250lbs.), and Ore Dressing Establishment, complete with power, breakers, concentrators, classifiers, elevators, pulverisers, calciner, magnetic separator, buildings, and erection	... ..	£10,450
Tramway from Droskyn Mine to proposed Mill, and pipe-line to convey water for ore treatment	... ..	£2,700
		<hr/>
		£27,710

In round figures, £30,000, to which must be added £10,000 to cover Mining Development cost, making the total working Capital, **£40,000.**

It may be considered judicious before erecting the milling establishment and rock-drilling plant, to first prove the Lode at the 40-fathom level; in that case the first outlay will amount to **£12,000.**

On this basis, working by hand labour, I estimate it will occupy six months to drive the said level 600 feet (viz., 400 feet east and 200 feet west), and to lay open the ore ground in the back by a series of upraises, aggregating 720 feet, at the inclusive running cost of **£1,000 monthly.**

On the other hand, should the Air Compressing Plant be brought into use with more rapid development, including the deepening of the Engine Shaft to the 80-fathom level, the monthly cost will be **about £1,600.**

With the Mill running and making returns, there will of course be an increase in underground expenditure, mainly in stoping, but also in advancing the development points more rapidly.

REVENUE. The crushing capacity of the 40 Stamps may be placed at 4,000 tons monthly, allowing a duty of $3\frac{1}{2}$ tons per head, and 29 complete working days. South Crofty Stamps, of 1,050 lbs., are crushing just on 3 tons per head, which is proportionately the same on difference in falling weight.

With the opening of a new Mine systematically, and adopting present day methods of economical mining, and water charges not excessive, the total working cost, including developments, ought to be covered with a return of 20 lbs. of black tin to the ton of ore crushed, or, say, 18/- with the price at £100.

The average yield at South Crofty Mine last year was 27.8 lbs. per ton, from 60.916 tons, on which a profit of £15,799 was shown, and this mine is 238 fathoms—1,428 feet—deep. Their average cost, including £2,968 written off for depreciation, was 21/6 per ton. At Droskyn, with a tonnage output of 4,000 tons per month, we may therefore safely calculate on the costs not exceeding 20/- per ton of ore.

Given a product of only 30 lbs. of tin oxide to the ton crushed, on the annual output of :—

48,000 tons, yielding 30 lbs. ... **642 tons.**

Calculating upon a Tin Metal Standard of £175 only, the price of black tin will be about £100 per ton, then we have :—

642 tons @ £100	... ..	£64,200
Expenditure on 48,000 tons @ 20/-	... ..	£48,000
		<hr/>
Profit	... ..	£16,200

The tin produced, however, not unlikely will average 35 lbs. per ton, bringing the gross profit up to **£27,000 per annum.**

Droskyn, below water level, is practically a virgin Mine awaiting development, where the full benefit of the introduction of modern appliances will accrue. The question of mine drainage is admittedly serious in the majority of the Cornish Mines, due not altogether to the volume of incoming water, but in part to the great depth attained, bad shafts, and old gear, adverse conditions that do not apply to Droskyn.

The accompanying Reports are so general in their elucidation of the valuable nature of this Property, that I have confined myself primarily with a description of the main lodes and their location.

Finally I must express my absolute confidence in the success of the undertaking when proceeded with on the lines contained in this report, in common with the other mining engineers who have previously recommended the Property.

JAMES ROBERTS, M.Inst.M.M

Dated, Perranporth, 15th June, 1911.

Droskyn & Wheal Ramoth Tin Mines.

(Supplementary Report).

The general report to which this is attached deals with the proposition on a business basis, to bring the Droskyn Section of this large Property to the producing stage, and my confidence in the success of the enterprise at therein expressed is great. But is it conceivable that a Company, before providing the requisite Capital to carry out all the work enumerated, would probably wish to determine more definitely the character and value of the Main Lode at the 40-fathom level for an appreciable length laterally.

Such preliminary development work can be accomplished at a nominal cost of about **£6,000**, by the introduction of a portable plant, and operating on similar lines to what is now being done at Wheal Coates Mine in the adjoining Parish of St. Agnes. The outfit there consists of a 25 H.P. Portable Engine, driving a pair of 9-inch bucket-lift pumps—speed, 16 strokes each of 3 feet, lifting 15,000 gallons of water per hour. With this equipment they drained the Mine 40 fathoms in about a fortnight, on a coal consumption of only one ton per day. The workings there comprise fairly extensive old stopes and levels; this, however, would not be the case at Droskyn, where there is a single shaft to drain, and only a few fathoms of drivages at the bottom.

For greater security at Droskyn, however, I would suggest, if this system of forking the water is adopted, to use two 10-inch diameter bucket pumps, and a somewhat more powerful engine; a small hoisting engine and boiler would also be needed. The whole would be more or less self-contained, easily and cheaply erected, and when it has completed the work foreshadowed at this Shaft, it would still be equally serviceable to place at another shaft, say, at Ramoth, or at an intermediate shaft, between Droskyn and Ramoth, which at no distant date would be required.

Droskyn Shaft is big enough to accommodate the two 10-inch lifts without enlarging, but there will be some clearing to do, as well as a little timbering, especially at, and for a few fathoms below, the collar of the Shaft. After laying out the ground at surface, and making the necessary arrangements for the supply and delivery of material, this work of placing the machinery and clearing the Shaft, could, I think, be completed within three or four months, when the extension of the 40-fathom level could be proceeded with.

This would be working on a very cautious principle, giving the utmost development on the expenditure incurred, with the satisfaction of knowing that the work accomplished at the same time advances the larger proposition towards the establishment of a sound mining business, and therefore is to be commended.

JAMES ROBERTS.

Dated Perranporth, 15th June, 1911.

November 20th, 1871.

Dear Sir,

I inspected the Mining Ground at Perranporth, to which you referred in your letter, on Thursday last, accompanied by Captains Pill and Bennetts, and beg to send you the following remarks thereon :

The Sett is situated to the west of the river, and to the north of the old Perran United and Perran St. George Mines, which formerly produced quantities of Copper, but are now idle.

A large Lode is seen on the beach near the Cliff at several points for about 150 fathoms in length, having a direction of about 5 degrees north of east, and apparently underlying south, about 3 feet in a fathom ; whilst in some places it is 3 or 4 fathoms in width. It is composed principally of hard quartz, and so far as can be seen at the surface, the parts of the Lode now standing do not contain any tin or copper of value. The south part of the Lode, however, for 4 or 5 feet in width, has been entirely worked away below the level of the beach, so that no portion of it can now be seen ; and it therefore seems probable that this part of the Lode must have produced some Copper or Tin that would pay to work.

A Shaft is reported to have been sunk by a former Company, about 40 years since, to a depth of 40 fathoms or 30 fathoms below the beach, and this lode cut into at that depth, but not much opened on. A large pile of stuff, some of which was evidently broken from this Lode, is now to be seen near the Shaft at surface, and the road to the west of the Shaft is also laid with stuff of a similar kind. Several stones which I picked up from here, and which I have since had assayed for Tin, were found to be of good quality. One stone produced $1\frac{1}{2}$ cwt. of black tin to the ton of stuff, others 1cwt., whilst some "smalls" taken from the burrow, and chiefly killas, produced 5lbs. of tin to the ton of stuff. Of course, it is impossible to say what quantity of stuff of this value is to be found in the Lode, but enough can be seen to enable me to state that, in my opinion, this Lode is well worth a trial.

About 50 fathoms to the south of the large Lode above mentioned, some branches have been worked on, in the side of the cliff, for about 15 feet in width, and several fathoms into the hill. These branches, which are generally small, and mixed with the killas, also contain some good Tin, and are worthy of attention. There are also two other Lodes still farther south, one 10 fathoms and the other 30 fathoms south of the branches just referred to. These also contain a little Tin, and the Lode nearest to the branches underlies north at an angle of about 45 degrees ; so that it will probably form a junction with the great Lode a few fathoms below the present bottom of the Mine.

Whilst all the Lodes above reported on are worthy of a trial, especially with the present high price of Tin, the great Lode seen on the beach from which the rich stones of Tin found in the burrow must have been broken, is the Lode to which I think particular attention should be paid. Before anything can be done to prove this Lode, a Pumping Engine must be erected for the purpose of draining the Mine ; and as there is a Shaft, said to be already sunk to a depth of 40 fathoms, the expense of draining the Mine will not be very great. I think an Engine of 50 or 60-inch cylinder would probably be of ample power for the requirements of the Mine ; but as the Mines to the south are now idle and full of water, it may be safer to erect a larger size. In the meantime, some further trials might be made on the South Lodes and branches above the sea level.

Yours faithfully,

(Signed) JOSIAH THOMAS.

H. Williams, Esq.

DROSKYN MINE,

16th November, 1871.

H. Williams, Esq.

Sir,—Having to-day inspected all that could be seen at the surface of this Mine, in reference to the Lodes and surroundings, I beg to submit the following as my report thereon.

The Sett is bounded on the North by the sea ; East by the Ramoth Mine ; and South by a portion of the Perran Great St. George Mines, and is sufficiently extensive for mining on a large scale. On the extreme North part of the Sett, or, rather, at high water mark, is seen a very large, well defined lode (very much resembling a copper bearing one), cropping out at the base of the cliff, for upwards of a hundred fathoms in length, and is from one to three, or even four, fathoms wide. The bearing seems to be nearly East by West, and its underlie about 3 feet per fathom south. I could find but little Tin in this outcrop, although portions of it had been worked from time to time for that metal, so deep as water permitted. Some 50 fathoms South of this gigantic Lode is a sort of perpendicular lode (from which I broke some good tin-stuff near the riverside) carrying along with it numerous small veins of tinstuff 10 to 12 feet wide, and which has been worked to a considerable extent from the face of the cliff, so deep probably as could be done without pumping machinery. A few fathoms further South, is another East and West Lode, underlying North 6 feet per fathom ; this is evidently a Tin Lode.

A few fathoms still further South is another fine looking Lode, gossany, and evidently a Copper bearing one.

A former Company seems to have sunk an Engine Shaft some 30 to 40 fathoms about midway between the North Lode (which underlies South) and the Southern one, which underlies North ; and at one or more of the levels, worked on this large South underlying one, as is evident from the character of the Lode-stuff now remaining at the surface ; some of which we dug from the road, which had been repaired with the Mine rubbish, and found to be good Tin-stuff.

A variety of the lode stones found in this stuff, which I thought likely to contain tin, I found on trial to be worth, on an average, 1cwt. 2qrs. 8lbs. of excellent black tin to the ton of stuff ; in fact, very much better than I anticipated. This, combined with the fact of nearly all the rubbish found on the Mine having been latterly carted off and stamped at a profit, shows clearly that the Lode at that depth must have been tinny, and if throughout such a large Lode of similar quality to that found at surface, it will be found a very valuable Property.

Then, this North underlying Lode, which will intersect the great South underlie at a depth from Adit of some 40 to 50 fathoms, is an important feature, especially when a perpendicular Lode carrying Tin in itself, as well as in its branches, lies between the two.

Geologically the situation is very favourable ; the surrounding killas is all that can be desired. On the South lies a large Elvan Course. In the Western part of the Sett the outcrop of Granite is near at hand ; also to the South ; and the whole is intersected by 2 or 3 fine cross-courses.

Therefore I have no hesitation in considering it an excellent speculation, and well worthy of being prosecuted vigorously by the erection of a good Steam Pumping Engine of, say, 50-in. cylinder, to drain the old workings at once. The former Company seem to have had a 36-inch Engine only, but looking at the size of the Lodes and Cross-courses, as well as the water found in the adjoining Mines, I think it may prove false economy to erect an engine of only just sufficient power for the time being, when a little increase of water might prove fatal to the enterprise.

I am, Sir,

Your very obedient Servant,

(Signed) S. BENNETTS.

OLD SHEPHERDS MINE,

March 20th, 1884.

To Capt. James Roberts,

Dear Sir,

DROSKIN MINE.

As requested, I now give you a few remarks on the above Property, having known it for over 55 years, during which time enormous quantities of Copper and Tin Ores have been raised and sold from the adjoining Mines, giving large profits, chiefly from Great Wheal Leisure and St. George, and also from the above Droskin Mine, which is situated to the North and in close proximity to these once celebrated, productive and profitable mines, and in precisely the same strata ; I am, therefore, enabled to speak strongly with regard to the future prospects in your new Sett.

I have often thought, and still think, that if the Droskin property is worked in connection with the Old Ramoth Sett it will be found to be one of the best pieces of Tin ground discovered in Cornwall.

I remember, about 50 years ago, the Agents in Wheal Leisure Mine felt so sanguine of success, they secured large interests in it ; and one of them said to my father, " Droskin is no speculation."

Looking at the different Lodes traversing the entire length of the Sett (which is extensive), and the outcrops of granite to the North West, also the Elvan Course to the South, with a most congenial Strata of Killas between, I have every confidence in the Property becoming a great success.

I should strongly recommend the amalgamation of Ramoth with Droskin, fully believing abundance of Tin will be found on the course of the many Lodes crossing the opening of the beach, and exactly parallel with the great courses of Ore in the Mines before named, Wheal Leisure and St. George, which are in close proximity.

I am, Dear Sir,

Yours faithfully,

(Signed) RICHARD NANCARROW.

January 1st, 1904. •

Dear Sir,

WHEAL RAMOTH TIN MINING SETT.

This Sett is bounded on the East by Wheal Vlow and Wheal Creeg Tin Mines, on the South by Budnic Tin Mine, on the West by Droskyn Tin Mine, and Wheal Leisure, and Great St. George Copper Mines, and to the North by the sea.

It is an extensive Sett, and is traversed by five known, well defined Tin producing Lodes. The workings that have been done by the Ancients is said to have been very rich, these workings are not very deep, probably owing to imperfect machinery that was then in use, and the low price of Tin at that time.

There is not the least doubt but that the Lode was rich, as a good deal of the waste dumps have been carted away and a plenty of Tin taken from them. A Mine that would barely pay to work with the old machinery and mode of dressing, should now, with the improved machinery, and high prices of Tin, give large profits.

The Wheal Ramoth Lodes are a continuation of Droskyn Lodes, to the East, and runs right through the entire Sett, and right on east through Wheal Creeg Sett which have been very productive.

In addition to the foregoing, there is a very large piece of virgin ground in the South-Eastern part of the Sett, which holds out a fine chance of success in that part. I had the charge of sinking a Shaft about two years ago, and took out some hundredweights of tin from there. We struck water in the Shaft, and abandoned it, although I have a high opinion of it.

I am engaged in mining at Budnic, which adjoins Wheal Ramoth to the South, and returning tin from there, and have been for some time past.

You will notice the Wheal Ramoth Tin Mining Sett is closely surrounded by what have been rich Tin producing Mines, and it is undoubtedly one of the best Tin Mining Properties to be found, and if vigorously worked has every chance of success, and I have no doubt it would be a boon to the shareholders.

I am, Dear Sir,

Your Obedient Servant,

(Signed) JAMES T. ELLERY.

WEST CHIVERTON MINE,

Near Truro,

October 14th, 1874.

Dear Sir,

RAMOTH MINE.

According to your request, I hand you the following as my report on the above Mine, which is situated in the Parish of Perranzabuloe, on the North Coast of the County of Cornwall. It is in a good mining district, being bounded on the N.E. by Perran Consols, on the S.E. by Budnick Consols, and on the W. by Perran St. George Mines, which yielded large profits to the shareholders.

It is one of the oldest mines in the County, and, as far as I know, there are no written records respecting it in existence, but I have heard from reliable miners who worked there that it is 40 fathoms deep, it produced large quantities of Tin, and in the bottom of the Mine there is a large and productive Lode.

The Sett is very extensive, and is traversed by six known E. and W. Lodes, almost parallel to each other, some of which have a northerly dip or underlie, and others a southerly, consequently they form intersections in depth, which in my opinion is a very important and highly promising feature, as under such conditions large bodies of ore are generally found.

The South Lode, known as North Wheal Leisure Lode, has been opened on for a long distance at the Adit level, about 140 fathoms of this length having been in tin ground, which has been worked away in the roof, and followed down in the bottom of the said level as far as the Old Miners could work for the water. I have no doubt of this being a valuable piece of ground in depth.

I recollect about 45 years ago a local party took up this Sett, erected a 60-inch Pumping Engine, and sunk an Engine Shaft to the 50-fathom level, with the view to unwater the old Mine, but they did not succeed in draining it below the 20-fathom level, although they drove a cross-cut to the Lode at the 40 and opened 10 fathoms West on its course. I think it may reasonably be assumed they were afraid to do more at that depth lest they holed to the Old Mine water. Consequently they sunk to the 50, where they supposed they were 10 fathoms below any of the old workings. At that depth they drove a level 40 fathoms west of the Shaft, and 7 fathoms east. I cannot state the results of these operations, but since the Mine has been closed, all the lodestuff which came from these levels has been carted some miles to a small Stamps, and yielded paying quantities of Tin, which speaks very favourably of the contents of the Lode.

Another important point, to which I would draw particular attention, is the existence in the western part of the Mine of a large cross-course. I have heard that one of the levels was extended in a rich Lode to the said cross-course, where a dislocation or fault takes place, and that the Lode has not been seen on the other side. It is the general opinion, which I fully share, that when discovered on the West side of this cross-course (Cotty's) the Lode will be found rich for Tin.

Looking at the favourable position of these Lodes to which I have referred, and the statements I have heard from reliable parties respecting the Old Mine, I have no hesitation in recommending it to mining Capitalists, believing, if taken up and properly equipped with a 70-inch Pumping Engine, and modern mining machinery, its development will prove to be a success.

Yours faithfully,

(Signed) RICHARD NANCARROW.