

**PRELIMINARY REPORT  
ON  
SCAMANDER MINERAL FIELD  
SPL 334**

**October 1951**

**Electrolytic Zinc Company of Australasia LTD  
By B Scott**

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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
West Coast Department

MEMORANDUM:

SUPERINTENDENT

Preliminary Report on the Scamander  
Mineral Field

I submit herewith a report by Dr. B. Scott in which he has gathered together all the available information on the Scamander Mineral Field. The majority of the information comes from published and unpublished reports of the Tasmanian Government Mines Department.

From this summary two main points stand out. (see Plate 3 and list of prospects).

1. Of academic interest is the prominent normal sequence of mineral zoning easterly from the Granite.
2. Of economic interest is the association of the strongest mineralisation of the area with three parallel lines of NW-SE faulting. The line of prospects 8,9,10 and 5 (see Plate 3) on the Orieco Fault has a parallel structure north of it through 7 and south of it one possibly continues through 6 & 11).

The mineralisation so far discovered along these faults has been tested only in the oxidised zone where small relatively high grade pods have been found. These would not prove attractive to the Company, but the possible existence of larger bodies of lower grade primary ore must not be overlooked.

It is possible that the airborne E/M survey may reveal anomalies in this area, but as the more deeply penetrating Afmag equipment is at present available to us it is recommended that this method be used along these lines of faulting commencing at the Orieco Mine and working northwesterly and southwesterly from this point.

This recommendation is made irrespective of whether the airborne geophysical survey produces anomalies or not. The country is open forest and very little line cutting if any would be required.



V.M. Cottle  
CHIEF GEOLOGIST.

ROSEBERY, 17th February, 1959

M.D. (1)  
Supt. (2)  
Geol (1)

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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

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West Coast Department

Memorandum:

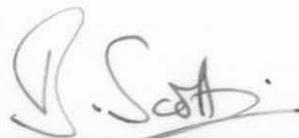
Chief Geologist.

Rosebery.

9th October, 1958.

Attached is a preliminary report on the Scamander Mineral Field in N.E. Tasmania, which is within our S.P.L. 334. This report is a summary of published and unpublished information.

The first section is "Summary and Conclusions", which is followed by the main body of the report.



Asst. Chief Geologist

BS/BMS  
Encl.

Distribution: Managing Director, Superintendent, File (2)

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## PRELIMINARY REPORT ON THE SCAMANDER MINERAL FIELD

### SUMMARY AND CONCLUSIONS

The mineralisation in the area consists of quantities of molybdenum, arsenic, bismuth, tungsten, tin, copper, lead, silver and gold. Copper, tungsten, silver and gold are the only metals which have been produced in marketable quantities.

The mineralisation in the Field occurs in well defined belts, as shown in plate A3.

#### A. Eastern Belt - Silver/Lead (page 6)

The mineralisation consists of a group of arsenopyrite-quartz veins which carry minor quantities of lead, zinc and copper sulphides with silver and generally traces of gold. The mines were worked entirely for their silver content which was found in the weathered portions of the veins owing to the formation of silver chloride (cerargyrite). The workings were shallow, with a maximum recorded depth of 130 feet and the silver values rapidly failed with depth.

There are no accurate records of production although it must obviously have been small and measured in hundreds rather than thousands of tons.

The mineralisation in this belt has been feeble and as a result the mines and production have been small. Consequently, the chance of discovering even a moderate tonnage of ore is slight and it does not warrant any further ground follow-up at the present stage of the exploration programme. A final check on this belt will be given by the results of the airborne geophysical survey, in the magnetic and electromagnetic techniques.

#### B. Central Belt - Lead/Zinc (page 6)

Two prospects are known but the work which has been carried out has not tested the potentiality of the area at all, the adits and shafts barely penetrating the surface of the veins. At the surface they appear to be leached and oxidised, and if the experience gained at the Oriéco Mine (in the central copper belt) can be applied here, this zone will extend to at least 1 to 200 feet below the present outcrop. Consequently, before the value of this belt can be gauged the airborne geophysical results will have to be examined.

There is no recorded production from either of the prospects.

C. Central Belt - Copper (page 7 )

The copper belt contains at least three strong north-west trending faults with the central, Orieco, vein having been traced for at least two miles. The veins have only been explored at depth at the Orieco Mine and these workings show that they have been leached of all copper values to an average depth of 200 feet below the surface. These values have been concentrated in a zone of oxidation some 200 to 280 feet below the surface with the primary sulphides beneath this zone. All of the production has come from the oxidised zone which appears to contain small bodies of high grade ore, say 50 to 400 tons of 15% copper. The recorded production is 359 tons of ore averaging 18.9% copper and 13.4 ounces of silver/ton.

Workings on a small scale the future of the belt lies in the finding of similar pods of high grade ore in the oxidised zone, which undoubtedly exist and which could be probed from the existing workings at the Orieco Mine. Working on a large scale the future of this belt lies in the finding of large tonnages of the primary sulphide ore beneath this zone of oxidation. In this event great reliance must be placed on geophysical methods of exploration, in particular the airborne electromagnetic survey which has recently been completed.

D. Western Belt - Tin/Tungsten (page 12)

This belt contains the Great Pyramid Tin Mine which has been the scene of considerable prospecting activity in the past. The cassiterite occurs as discrete veinlets up to 2" in width, and as stockworks and disseminations through the sediments. There is no doubt that high grade ore occurs in some of the veins and widths of 5 feet, with 6.37% tin are recorded. However, in this preliminary evaluation of the property all values of above 0.2% tin have been taken in to account and on this basis a possible zone of low grade ore 150 to 300 feet in width and at least 1200 feet in length has been outlined. This distribution of values is promising and an initial programme of further work has been outlined to consist of:

- i. Geological mapping of the surface and underground development. This involves approximately 2000 feet of underground mapping and an area 1000 yards square of surface mapping. Provided that this work maintained interest the next stage would consist of:

- ii. Trenching, and sampling across the strike of the cassiterite zone.

Between the Great Pyramid Tin Mine and the granite contact to the west numerous small quartz/tourmaline veins occur with sporadic quantities of wolfram and molybdenite. This is an area of feeble mineralisation and it is considered highly unlikely that even moderate tonnages of ore would be discovered here.

The effectiveness of the airborne geophysical survey in this belt is difficult to evaluate at this stage since cassiterite has only a low to medium conductivity/magnetic susceptibility and by itself it cannot be expected to create a marked disturbance in a magnetic field. However, indirect but associated effects may be recorded such as the location of a granite cupola which does not crop out at the surface.

E. Brilliant Creek Gold Field (page 15)

The gold mineralisation occurs in quartz veins at the granite/sedimentary contact and it is sporadic and sparse in its distribution. It is considered that this area does not warrant further investigation for gold values.

PRELIMINARY REPORT ON THE SCAMANDER MINERAL FIELD

1. LOCATION AND ACCESS

The Scamander Mineral Field is situated within SP.L. 334, between the towns of St. Marys and St. Helens and within the watershed of the Scamander River (plate A1). It covers an area of approximately 50 square miles.

Access to the Field is good as the Tasman Highway, which connects St. Helens to Hobart, runs through the area at the coast. From the town of Scamander a good road runs north-west to Upper Scamander and from this latter point access can easily be gained to the Great Pyramid and Orieco Mines via secondary roads. The western portion of the Field is accessible from Hogans Track, via Mathinna or St. Helens.

The country is well timbered but it is usually free from undergrowth which enables the area to be walked through with ease.

2. TOPOGRAPHY

The Field forms part of the peneplain which covers most of N.E. Tasmania. The country shows a low coastal plain which a short distance inland gives way to a raised plain 60 to 100 feet above sea level, this plain gradually rises to the west to an ultimate elevation of 900 feet. Several minor peaks rise above this plain to 1000 feet, with the Western Pinnacle (near the Gt. Pyramid Mine) rising to 1200 feet.

The two north flowing tributaries of the Scamander River divide this plain into the three north-south trending mountain ranges of the area; the Coastal Range, Scamander Tier and an unnamed range to the west.

The valleys are normally steep sided with a rapid run-off of water.

3. GENERAL GEOLOGY

The general geology is shown on plate A2. The Scamander Slate and Quartzite is the name given to the oldest succession of sediments

in the area by Walker (1957). These sediments, which are undoubtedly part of the Mathinna Group of Silurian age, consist of a monotonous series of closely stratified shales, siltstones, orthoquartzites and sub-greywackes. Prior to the intrusion of the granite these sediments were tightly folded about axes which trend 125 degrees and which are overturned to the north-east.

The Devonian granite is represented by the Coastal Range quartz monzonite and this lenticular mass forms the southern portion of a large granitic body which passes north-west to Derby and Gladstone. The granite on the western portion of the area is part of this same large body, consequently the Scamander Mineral Field is surrounded on three sides by granite (north, east and west) and it is also undoubtedly at no great depth beneath the sediments within this embayment. It is believed that the mineralisation is genetically related to this granite.

The Permo-Triassic sediments are absent, having been removed by erosion.

The unconsolidated Tertiary and Recent sediments lie unconformably on the Scamander Slate and quartzite of the coastal plain. The cover at Diana Basin is three miles wide and tapers from north to south, finally disappearing near Falmouth. An east-west section through these sediments shows them as a thin veneer (maximum thickness of 150 feet ?) on a gentle east dipping grade from the base of the Coastal Range to sea level.

Faulting is common in the area and it is related to at least the lower Tertiary and Devonian. The most prominent and strongest direction is north-westerly and it is along this direction that most of the known mineralisation occurs.

#### 4. MINERALISATION

The mineralisation in the area consists of quantities of molybdenum, arsenic, bismuth, tungsten, tin, copper, zinc, lead, silver and gold.

Twelvetrees (1911) was the first to recognise that the mineralisation in the Field occurs in belts. He divided it into three categories; his work has been adopted and extended with the addition of a fourth, lead/zinc belt (plate A3).

These zones have already been reviewed in the "Summary and Conclusions" section at the beginning of the report. Each belt will be considered in turn.

A. Eastern Belt - Silver/Lead

The mines in this group were the first to be worked in the Field with the Scamander River Silver Mine in operation about 1870. However, by 1911 all of the mines were abandoned. During the intervening period they were worked for the high silver values which were obtained from the weathered portion of the veins owing to the formation of silver chloride, cerargyrite. The workings were shallow, with a maximum alleged depth of 130 feet and the silver values rapidly failed with depth.

The mines were either at the contact of the Coastal Range quartz monzonite with the sediments of the Mathinna Group, as at the Scamander River Silver, Scamander Bell and Beulah Silver Mines which are just to the west of the town of Scamander, or wholly within the sediments as at the Yarmouth Proprietary Mine which is about 2 miles to the east of the present granite/sediment contact. There is evidence to suggest that the mines were located on a north-east trending set of veins of average width of 4 to 5 feet. Development within the mines was quite small and the veins were only followed for about one to 200 feet along their strike.

There are no accurate records of production although it must obviously have been small and measured in hundreds rather than thousands of tons. However, in some cases the grade of the ore was high, as in the Beulah Silver Mine which in 1896 - 1897 produced 51 tons of ore averaging 92½ ounces of silver/ton; with one parcel of 6 cwt. giving as high as 241 ounces/ton.

Conclusion

The mines and production in this belt have been small and the mineralisation feeble. Consequently the chance of discovering even a moderate tonnage of ore is slight and it does not warrant any further ground follow-up at the present stage of the exploration programme. A final check on this belt will be given by the results of the airborne geophysical survey, in the magnetic and electromagnetic techniques.

B. Central Belt - Lead/Zinc

a. Paul Behr Prospecting Association

On section 3976 - 93M an adit has been driven south-westerly into the hill from river level. A vein of unknown width is reported to have been cut and driven on for some distance, containing quartz with pyrite, galena and sphalerite with splashes of oxidised copper and zinc minerals (Twelvetrees, 1911).

There seems no doubt that this vein is the same mineralised fault that exists to the north west in the Orieco district, but with its mineral constituents changed.

b. North Scamander Mine

This mine is situated about 1 mile to the south-west of Paul Behr's adit and it consisted of sections 3941 - 95M and 3940 - 93M.

Siliceous gossan occurring along a N.N.W. trending fault first attracted attention to this area. Two short adits, a small shaft and surface trenching were carried out prior to 1911 in order to expose the vein. The vein (of unreported width) was found to consist of, primarily, quartz, with patchy values of sphalerite, galena, pyrite, chalcopyrite and magnetite. According to Twelvetrees (1911) this is the only vein in the Field which contains magnetite, he also reports that the vein appears to be a replacement body rather than the fissure filling type.

There has been no production from this lead/zinc belt.

Conclusion

The prospecting which has been carried out has not tested the potentiality of this area at all, the adits and shafts barely penetrating the surface of the veins. At the surface the veins appear to be leached and oxidised, and if the experience gained at the Orieco Mine can be applied here, this zone of leaching and oxidation will extend to at least 1 to 200 feet below the present outcrop. Consequently, before the value of this belt can be gauged the airborne geophysical results will have to be at hand.

c. Central Belt - Copper

a. The Orieco Copper Mines

i. Location and History

The copper deposit which lies about 2 miles north north east of Upper Scamander was originally held by the Eastern Proprietary Copper and Silver Mining Company in 1897. In the early part of this century the leases 4376M and 4152M were held by the Orieco Copper Mines Limited and in 1911 by the Mt. Balfour Copper Pty. At the present day a 20 acre lease application (number 29M/57) is held in this area by W.P. Holman.

The mine is readily accessible from Upper Scamander via a well preserved formation which leads to the south bank of Eastern Creek.

The workings consist of an adit, driven in a north-westerly direction along the vein for nearly 900 feet and two small shafts. From the adit a winze was taken to 87 feet below adit level, which at the present time is full of water. The two shafts appear to be located on a prominent cross fault which trends 010 degrees and dips 70 degrees to the east, no information is available on these shafts.

This prospect is the only one in the mining field which provides any information on the behaviour of the sulphide mineralisation with depth, the winze from the adit reaching to 335 feet below ground level (Henderson, 1941).

#### ii. Geology

The copper mineralisation occurs in a strong north-west trending fault which dips steeply to the south west (80 degrees). This fault is a regional feature and it can be traced for approximately 2 miles along the strike from the Paul Behr Prospecting Association in the south-east to Dunn's section in the north west. The country rocks consist of folded slates and orthoquartzites of the Mathinna Group, with the fault parallelling the regional strike of the sediments.

In common with the other mines and prospects in the area attention was first called to the mineralisation by the prominent outcrops of siliceous gossan. These outcrops are reported to have a barren appearance and consist essentially of limonitic, cherty material accompanied by chloritised slates and veins of quartz (Henderson 1941).

#### iii. Mineralisation

Two patches of copper ore were met in the adit, as shown on the longitudinal section on plate A4. This section, and plan, of the workings is based on work carried out by Q.J. Henderson in 1941.

From the work of Waller (1901), Twelvetrees (1911) and Henderson (1941) the longitudinal section of the vein can be divided into three categories:

##### a. Upper Leached Zone

The copper mineralisation to an average depth of 200 feet has been completed leached out, leaving a barren fault plane.

b. Oxidised Zone

Beneath the leached zone a zone of oxidised copper minerals occurred. This oxidised section would contain above average values of copper as it undoubtedly contains some of the values which were leached from the upper portion of the vein. Within this section, which is estimated to be 60 - 80 feet deep, occur the number one and two ore lenses which, according to Henderson (1941) pitch at 80 - 83 degrees to the south-east.

The total estimated production of 359 tons of copper ore has come entirely from this zone, the ore consisting of a mixture of copper oxides, sulphate and carbonates (chalcocite, cuprite malachite and azurite). (see Table 1). The water level is approximately 15 feet below adit level in both ore lens.

Number One Ore Lens. The first lens of ore was intersected at 130 feet from the portal and it extended approximately to 190 feet. A winze was put down to 16 feet and drives opened out for a distance of 32 feet; the ore has been stoped to adit level, over a longitudinal distance of 25 feet.

Henderson (1941) channel sampled the adit above this stope, the positions of these and other samples are shown on the plan on plate 4. The 7 samples taken from 130 - 190 feet have an average width of 4.4 feet and an averaged copper content of 1.82%. A sample, taken in the south end of the stope, 9 feet below adit level, over a section of 3 feet contained 5.9% copper.

Number Two Ore Lens . The lens of ore was intersected at 375 feet from the portal and it extended to 545 feet. A rise to the surface was completed and a winze was sunk to 87 feet below the adit. Henderson (1941) took four channel samples (number 21, 20, 12 and 19) with an average width of 6.4 feet from the adit over this stope. These samples contain an average content of 5.4% copper. In the south-east drive from the 20 ft. winze two samples with an average width of 3.3 feet contained an averaged value of 7.5% copper.

c. Primary Ore Zone

The adit should have passed beyond the oxidised into the primary ore zone at approximately 650 feet from the portal. According to Twelvetrees (1911) the vein beyond this distance is represented by "a channel of black rock, with occasional signs of leaching, 3 feet in width". The face of the adit, 940 feet from the portal, showed "soft slate charged with pyrites". Twelvetrees (1911) also describes the 87 ft. winze which was sunk beneath number two ore lens to a depth of 16 ft. at the time of his

visit. At this depth he describes the lode channel as "wide and strong" but that the average copper and silver content was low, also that the channel contained some chalcopyrite and sphalerite and arsenopyrite.

The diamond drilling carried out by the Department of Mines in 1941-42 was a result of Q.J. Henderson's report of 1941. Two holes were drilled, one beneath the number two ore lens and one beneath the S. Orieco Prospect. The former hole, 625 feet in length, was apparently drilled at an inclined angle of 30 degrees in order to intersect the vein below adit level. However, its position is not accurately known and consequently it cannot yet be plotted on the plan or section. The core has not been examined but according to the Director of Mines Report for 1942 the results were not encouraging.

The Orieco vein continues to the north-west into Dunns section 4470, Its course is marked by barren siliceous gossan, but little or no prospecting work has been carried out in this area. The Orieco vein in this section is reported to be crossed by a north-south trending vein.

b. South Orieco Prospect

The southern extension of the Orieco Vein beyond Eastern Creek has had little prospecting. The vein, as exposed in the Creek, is nine feet wide and consists of dense chloritised rock with arsenopyrite, sphalerite and chalcopyrite (Henderson, 1941). An adit was driven on the south bank of the Creek along the vein for 43 feet and a small shaft was sunk near its entrance. However, both were in the zone of weathering (leaching) of the vein and beyond proving the persistence of the vein they served no useful purpose.

In 1942 the Department of Mines completed a diamond drill hole 376 feet in length below the surface in order to intersect the vein at depth. Its position is not accurately known and the core has not been examined but according to the Report of the Director of Mines for that year the results were not encouraging.

c. Dunn's Prospect (sections 4468 and 4469)

Dunn's prospect is located on a north-west trending vein some 550 yards to the north east of the Orieco workings. In common with the Orieco vein the surface exposure is marked by siliceous gossan.

Prospecting operations consist of an adit driven 100 feet in a north westerly direction along the strike of the vein, which consists of "quartz with arsenopyrite embedded in gossaneous and decayed lode-material" (Twelvetrees, 1911). A winze about 20 feet deep was sunk at the entrance

to the adit. Henderson (1941) took a five foot channel sample across the face of the adit which assayed 0.15% copper.

On the southern section (4469) a small shaft was sunk on the apparent extension of the vein in section 4468 but at the time of Twelvetrees visit in 1911 nothing was visible in the dumps except a little pyrite.

d. Ringarooma Bay Prospecting Association

This association held sections 4126M and 4125M to the north east and adjoining the Great Pyramid Tin Mine, and to the south west of the Orieco Mine.

On section 4125 a persistent line of siliceous gossan trending north-west is mentioned by Twelvetrees (1911). Two shallow trenches were cut across the gossan, exposing 6 feet of siliceous material (Henderson, 1941).

An east-west vein is known on section 4125 but no prospecting has been carried out on its occurrence.

Conclusions

The copper belt contains at least three strong north-west trending faults with the central, Orieco, vein having been traced for at least two miles. The veins have only been explored at any depth at the Orieco Mine and these workings show that the vein in this locality has been leached of all copper values to an average depth of 200 feet below the surface. These values have been concentrated in a zone of oxidation some 200 to 280 feet below the surface with the primary sulphides beneath this zone. All of the production has come from the oxidised zone which contains small bodies of high grade ore, say 50 - 400 tons of 15% copper.

Workings on a small scale the future of the zone lies in the finding of similar pods of high grade ore in the oxidised zone, which undoubtedly exist and which could best be probed from the existing workings of the Orieco Mine. Working on a large scale the future of the zone lies in the finding of tonnages of the primary sulphide ore, beneath this zone of oxidation. In this event great reliance must be placed on geophysical methods of exploration, in particular the airborne electromagnetic survey which has recently been completed.

D. Western Belt - Tin/Tungsten.

a. The Great Pyramid Tin Mines (sections 4011 and 4015)

i. Location and History

The original sections covering the Great Pyramid Tin Mines are situated about 1 mile to the north west of Upper Scamander and 1 mile to the south west of the Orieco Mine. The sections were acquired in 1910 and the company carried out a considerable amount of prospecting work which included the sampling and driving of approximately 2000 feet of adit and shaft development. During 1914 an option over the property was granted to the Troy Tin Syndicate which extended some of the development which had <sup>been</sup> previously completed and resampled a considerable portion of the old workings and all of the new work.

At the present time the property is within S.P.L. 334, held by V.M. Cottle for the Electrolytic Zinc Co. of A/Asia Limited. Access to the property from the Upper Scamander bridge is easy, via a well preserved but narrow road formation.

ii. Geology

The area is underlain by slates and orthoquartzites of the Mathinna Group. Sections constructed, but not shown here, demonstrate that these have been folded about a north-south axis which dips to the west and gives a monoclinial type of fold. Minor east-west and north-west/south-east folds are impressed on this major structure.

iii. Mineralisation

The cassiterite occurs as discrete veinlets up to 2" in width and as stockworks and disseminations through the sediments. It is a noticeable feature that the cassiterite has a definite preference for the orthoquartzites with the slates apparently bearing little or no tin. Quartz is the only gangue associated with the cassiterite and sulphides are generally absent.

There is no doubt that high grade ore occurs in some of the veins and widths of 5 feet, with 6.37% tin are recorded. However, in this preliminary evaluation of the property all values above 0.2% tin have been taken into account. The values used are those on the plans of

the Great Pyramid Tin Mine and the Troy Tin Syndicate.<sup>1</sup> Where on identical lengths the assay values have differed the two values have been averaged. These low grade values fall within a zone of 150-300 feet in width and up to at least 1200 feet in length and which trends east to west, at right angles to the direction of the major fold. This distribution of values is promising and demonstrates that further prospecting work should be carried out on the property. This work should consist of:

- a. Geological mapping of the surface and underground development. This involves approximately 2,000 feet of underground mapping and an area 1000 yards square of surface mapping. Provided that this work maintained interest the next stage would consist of:
- b. Trenching, and sampling north to south across the cassiterite zone.

b. Tungsten and Molybdenum Mineralisation at the Granite Contact

Numerous small quartz/tourmaline veins with sporadic quantities of wolfram, molybdenite and arsenopyrite with some gold values are known between the Great Pyramid westwards to the granite contact, and northwards to Constable Creek. The veins are either within the granite or the contact sediments, which have been thermally metamorphosed. Their occurrence in the granite strongly resembles the mineralisation in the Castle Carey Mineral Belt, although the intensity of mineralisation here

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<sup>1</sup> Sampling has been carried out on three different occasions at this property:

- a. The original sampling carried out by the Great Pyramid Tin Mine in 1910. According to Twelvetees who visited the property in 1911 the sampling was carried out in a systematic and comprehensive manner, over lengths of 10 feet. The assays were carried out at the Mt. Bischoff Tin Works.
- b. The sampling carried out in 1914 by the Troy Tin Syndicate was over lengths of 5 feet. There is little essential variation in the grade of ore when comparison is made between these two sampling campaigns, over identical lengths.
- c. In 1957 the Department of Mines carried out a check sampling campaign for 17 locations (Keid & Cullins, 1957). Generally these check samples showed a lower content of tin than either of the previous sampling campaigns.

appears to be considerably less. The veins trend north to south or north east to south west and have a vertical dip, they are generally up to 2 feet in width (Hills, 1914).

a. Constable Creek Wolfram Mine

The tungsten mineralisation occurs within a granite mass which appears to be a small isolated protuberance from the main granite to the north-west. The general strike of the veins is 285 degrees and by 1952 the main lode, the only lode worth working, had been investigated over a strike length of 500 feet and to a depth of 25 feet. The width of this vein varies from one to six feet with the wolfram occurring in small isolated patches within the quartz. Sulphides occur in small quantities, molybdenite, pyrite, arsenopyrite and bismuthinite. Cassiterite is reported to occur in the joint planes of the contact sediments.

Up to 1952, one ton of wolfram had been extracted from the main vein, the vein material averaging 1% wolfram, according to Walker (1957). The property was abandoned during 1953.

b. MacLeods Prospect

This prospect was covered by sections 7181M, 7178M and 7179M located 3 miles to the north east of the Great Pyramid Tin Mine. The northern part of these sections includes an area which was held in 1901, by the Baden Powell Wolfram Company, and in the south by the Carson De Beers Wolfram Company. The prospect is at present held by H. Lutwyche under mineral lease applications 65M, 68M/51 and J.M. Brook on lease 37M/56. The wolfram occurs in quartz veins which are wholly within sediments of the Mathinna Group, the granite contact being further to the west. In their mineralogy and mode of occurrence they are similar to the veins at Constable Creek.

There are no accurate figures of production but the total figure would be of the order of two tons of wolfram.

The Hawkins-Tucker Arsenic/Gold prospect which was examined in 1951 by G. Hall (report number 50) is within this area.

Conclusions

The future of the tin belt lies in the establishment of a tonnage of low grade ore at the Great Pyramid Tin Mine and a preliminary plan of investigation has been outlined.

The tungsten/molybdenum belt to the west is an area of feeble mineralisation and it is considered highly unlikely that even moderate tonnages of ore would be discovered.

E. Brilliant Creek Gold Field

The Brilliant Creek Gold Field is located approximately 8 miles to the north west of Upper Scamander and it is best reached by following Hogan's track either from Mathinna or St. Helens.

The field was active in the late 19th century and a number of sections were marked out which primarily covered the granite/sedimentary contact. The gold occurred in quartz veins, with arsenopyrite, pyrite, galena and sphalerite. According to Twelvetrees (1911) the best prospect was the Queen of the Earth Mine, which produced 54 tons of ore averaging 22 cwts. of gold per ton. In 1930-1935 prospecting work was carried out on the Golden Ridge Mine, the only recorded production during this period was in 1932 when 148 tons of quartz were treated, recovering 2.5 ounces of gold, an average recovery of 8.1 grains per ton (Henderson, 1939).

Conclusions

The gold mineralisation does not warrant further investigation.

5. SUMMARY AND CONCLUSIONS

These have already been outlined in the section at the beginning of the report.

BS/BMS

  
Asst. Chief Geologist

September, 1958.

R E F E R E N C E S

General Information

- |                                    |      |                                                                                                                     |
|------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|
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TABLE 1

Recorded Production from the Orieco Copper Mine

		<u>Tonnage</u>	<u>Copper</u>	<u>Silver/Long Ton</u>
(1)	1896	100 long tons	28%	17 ozs.
(1)	1897	196 $\frac{3}{4}$	17%	13
(2)	1910-1911	27	10.2%	11.7
(3)	1940	13	10.8%	8.5
(5)	1941	22	9.7%	5.1
(5)	1942	?	0.478 tons of copper produced	
		<hr/>		
		359 tons	18.9%	13.4 ozs/ton
		<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>

Notes

- a. The production in 1896 and 1897 was primarily from the number two ore lens, with only about 20 tons reported from the number one lens.

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TABLE 2.

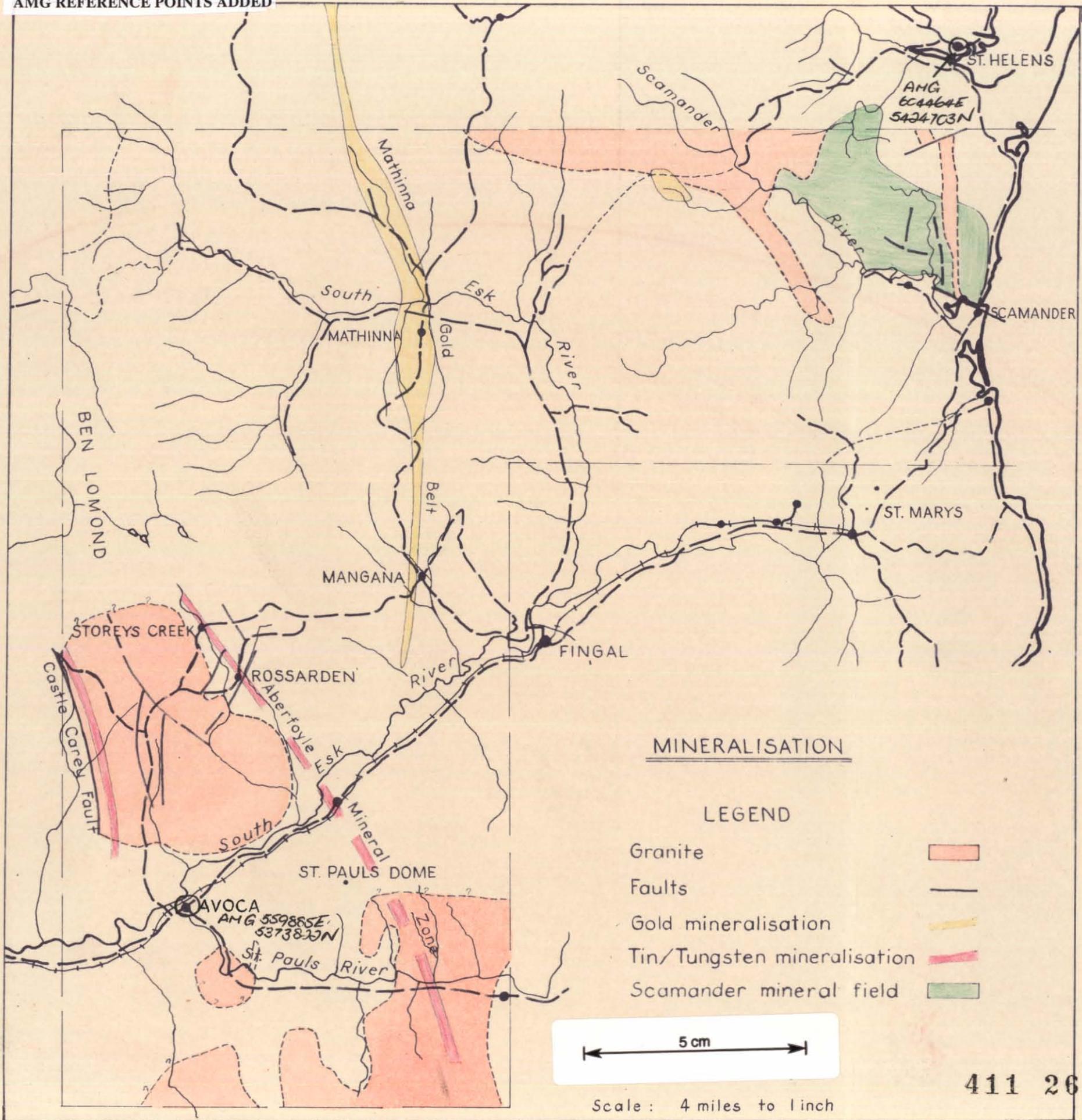
MINERALISATION - SCAMANDER MINERAL FIELD

LIST OF PROSPECTS/MINES

1. Yarmouth Pty.
2. Scamander Bell
3. Beulah
4. Scamander River
5. Paul Behr
6. North Scamander
7. Dunn's
8. Dunn's
9. Orieco
10. South Orieco
11. Ringarooma Bay
12. Gt. Pyramid
13. Constable Creek
14. MacLeods
15. Hawkins-Tucker
16. Double event
17. New Carthage
18. New Golden Ridge
19. Golden Ridge
20. Brilliant
21. Queen of the Earth.

The numbers refer to the numbered prospects on plate A3 opposite.

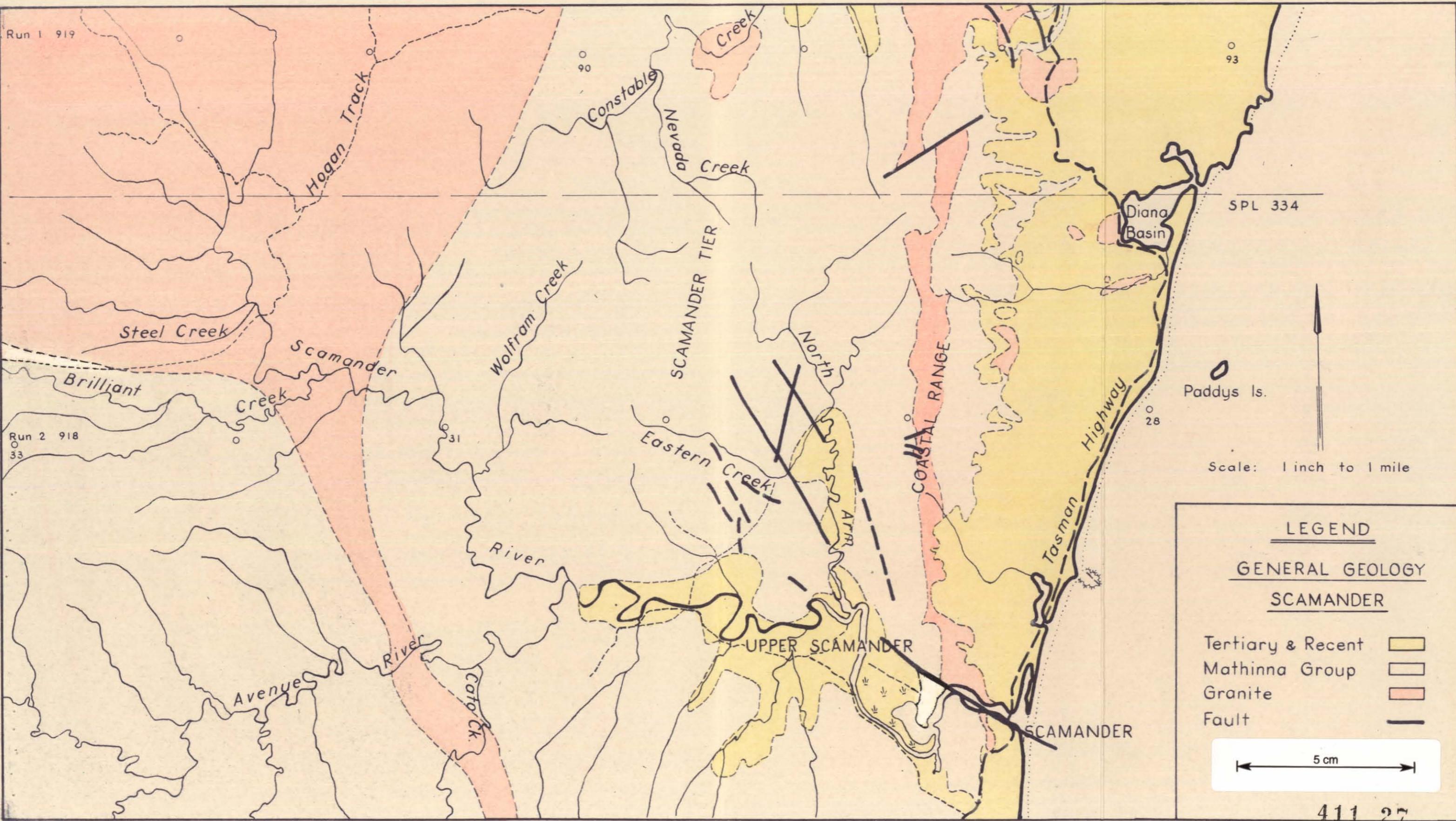
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411 26

Run 1 919

Run 2 918  
33



SPL 334

Paddys Is.

Scale: 1 inch to 1 mile

LEGEND

GENERAL GEOLOGY

SCAMANDER

- Tertiary & Recent
- Mathinna Group
- Granite
- Fault

5 cm

411 27

A & 2

Run 1 919

411 28

SPL 334

Run 2 918

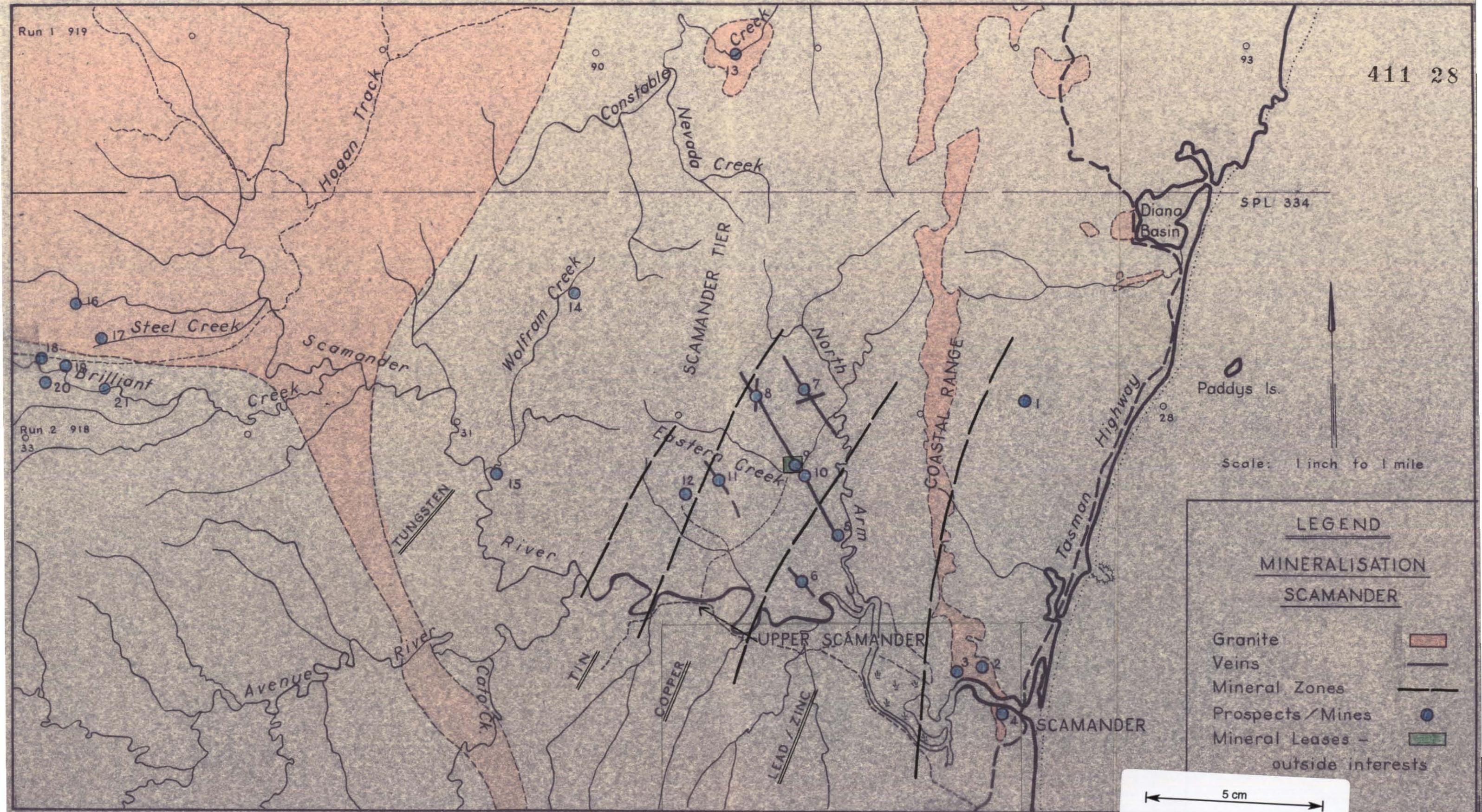
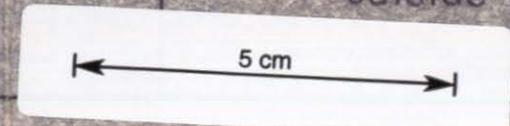
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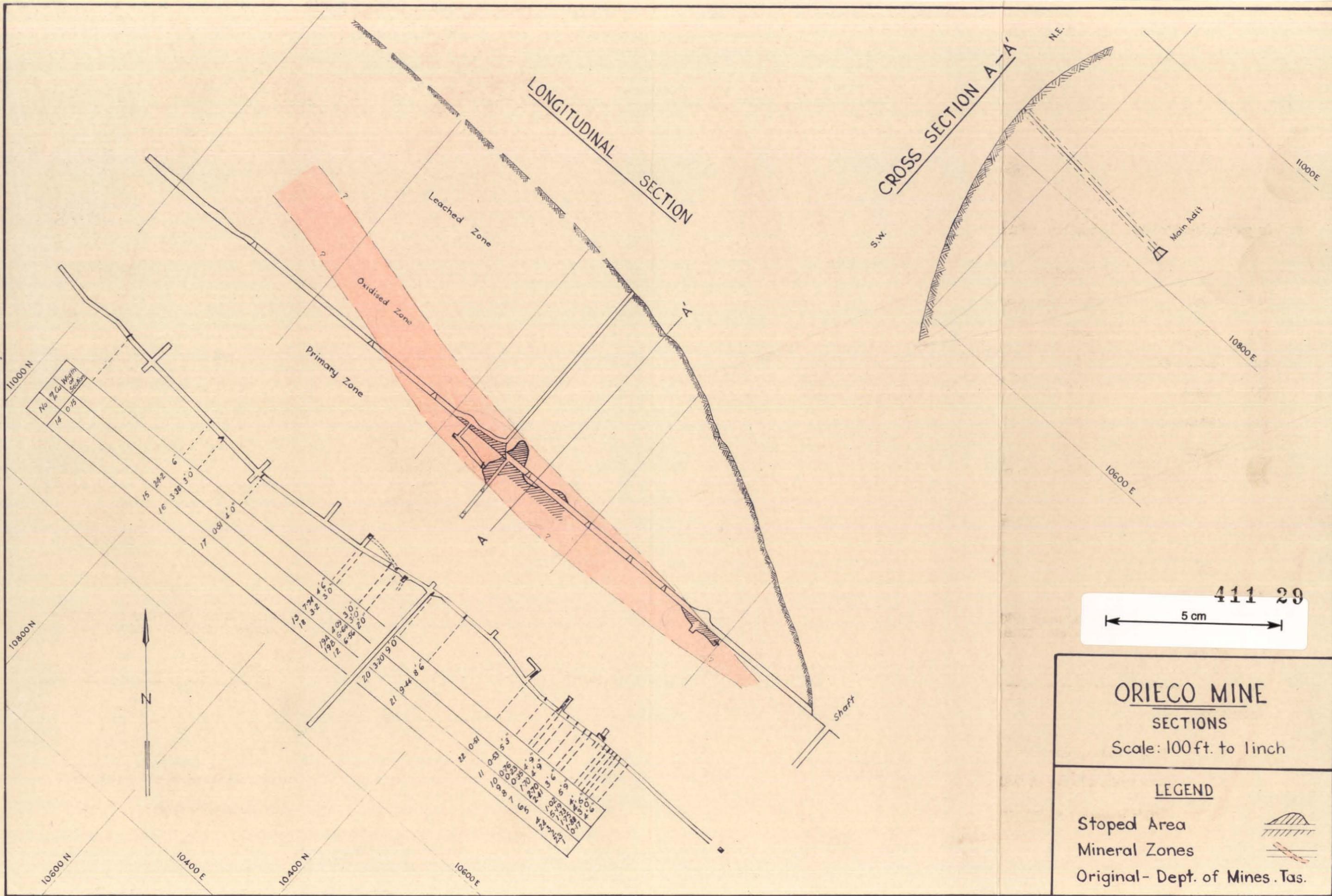
LEGEND

MINERALISATION

SCAMANDER

- Granite Veins 
- Mineral Zones 
- Prospects / Mines 
- Mineral Leases - outside interests 





411 29

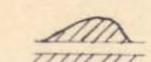
5 cm

**ORIECO MINE**

SECTIONS

Scale: 100 ft. to 1 inch

**LEGEND**

Stoped Area 

Mineral Zones 

Original - Dept. of Mines. Tas.