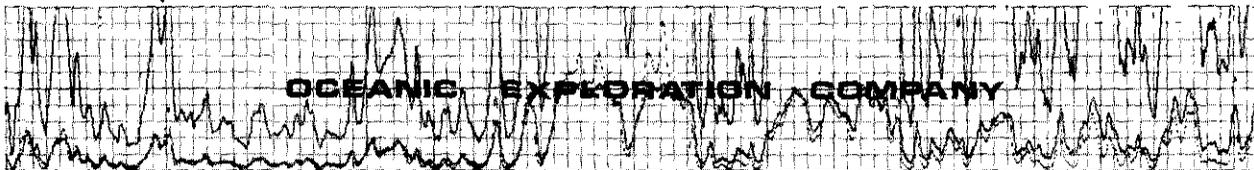


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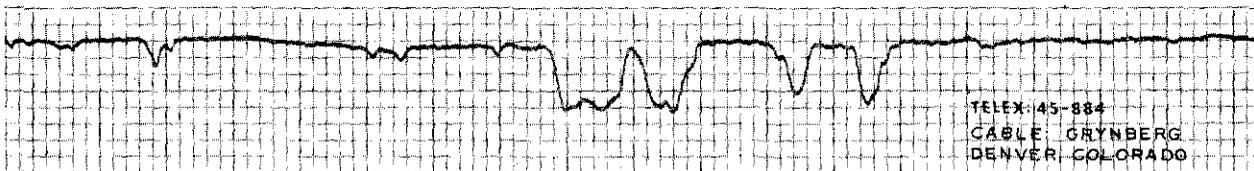
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OCEANIC EXPLORATION COMPANY

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MICROFILMED

A
MOLYBDENUM PROSPECT
IN
TASMANIA

71-826

E.L. 22/70, Scottsdale - Diddlowm Plains

Prepared by: Dr. John Chronic
A. V. Gallagher

OCEANIC EXPLORATION COMPANY

Signed: *John Chronic*

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002

INTRODUCTION

Oceanic Exploration Company has applied for and received an exploration licence to explore for metallic mineral deposits in the Diddleum Plains Area in the northeastern Tasmania (Fig.1). Oceanic's exploration licence covers approximately 200 square miles and the area covered by the licence area is shown on Figure 2. The geological staff of Oceanic feels there is a strong possibility that commercial deposits of Molybdenum are located within the licence area.

A search of the Tasmania Department of Mines files has revealed that no adequate modern study incorporating geochemistry or geophysics has been made in the area, to determinate whether large-volume or hidden ore bodies exist there.

Tasmania affords a stable political climate and the Japanese steel industry should provide a ready market for Molybdenum.

TASMANIA

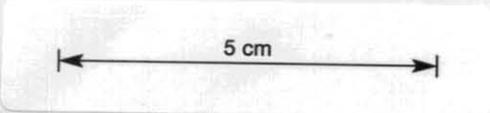
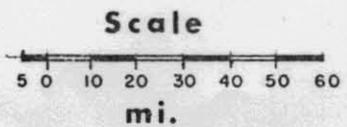
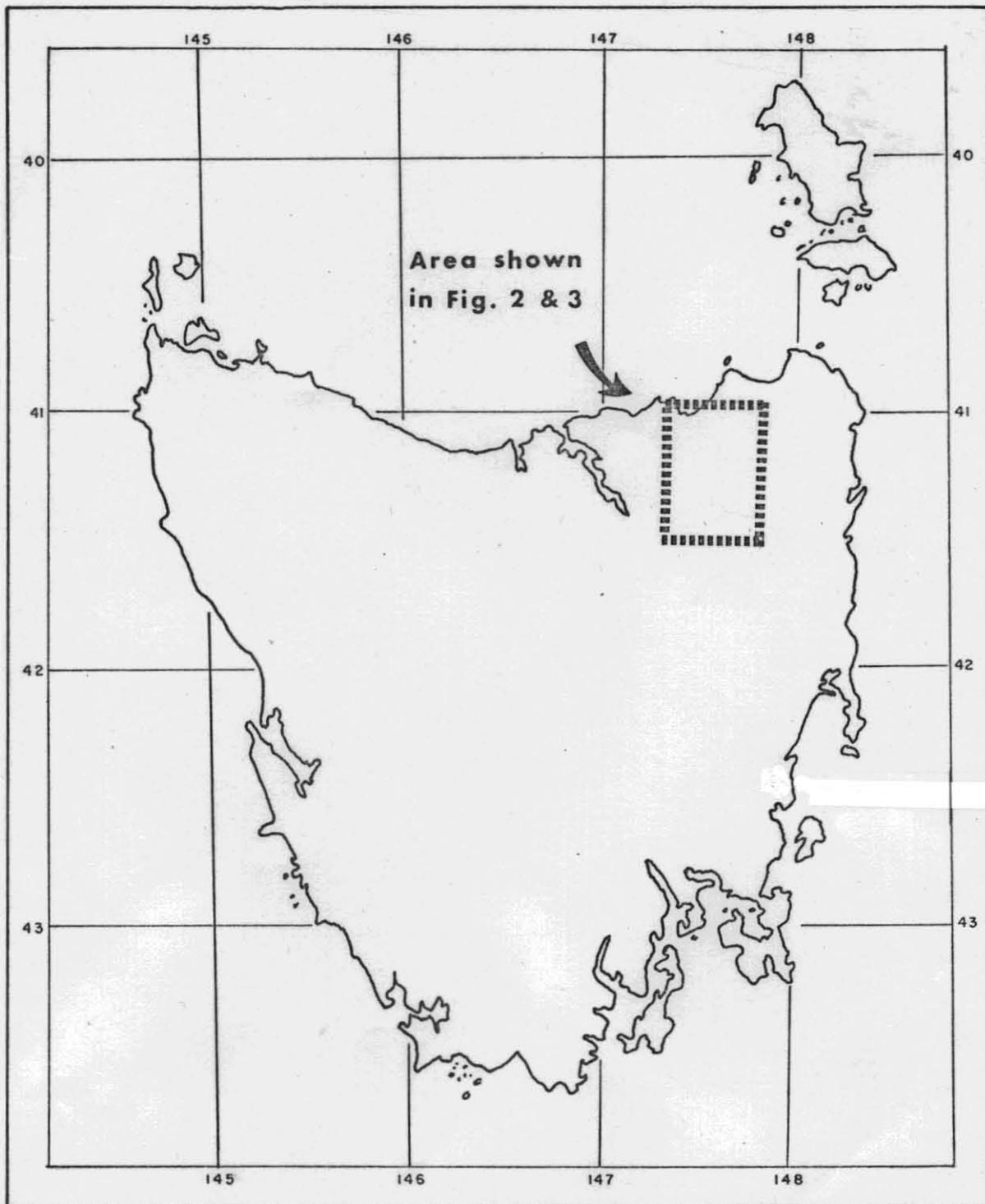


Figure 1. General location of Oceanic Exploration Company's metallic minerals licence in Tasmania.

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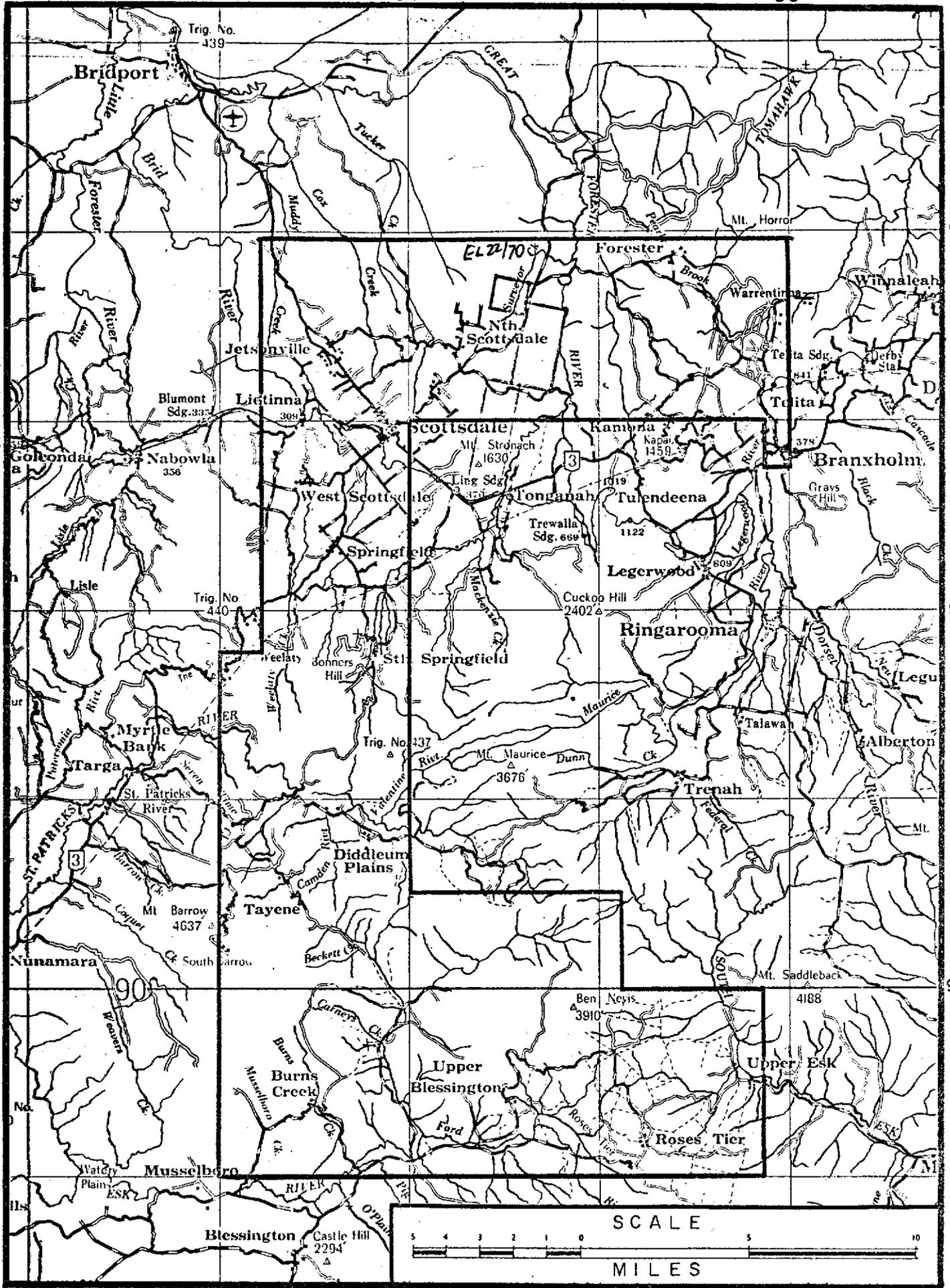


Figure 2. Area of Oceanic Exploration Company's metallic minerals exploration licence.

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GEOGRAPHY

Accessibility

Northeastern Tasmania has been extensively settled and farmed; several very large mines are present on the island and others are being developed. A good transport network, involving surfaced and unsurfaced roads, railways, and seaports, has been established. The licence area is about 35 miles east of the port city of Launceston (population 60,000) where ships with drafts to 18 feet can be accomodated; larger ships dock at Bell Bay, about 35 miles to the northwest. A railroad connects Launceston with Scottsdale, a small farming town within the licence area. A paved road runs from Launceston through Scottsdale to the east coast; another connects Scottsdale with Bridport, on the north coast some ten miles distant.

All parts of the Oceanic licence area are reasonably accessible by road (Fig.2). During the dry (summer)season, from November to April, field exploration parties using standard or 4-wheel drive vehicles will experience no transportation problems. The northern part of the area is rolling farm land, sparsely populated, interspersed with areas of intermittent placer mining. Relief is not great - perhaps 500 feet. The southern part is also farmed, but contains some unpopulated country in which steep hills rise to about 4,000 feet above sea level. Much of the area is covered with well developed soil and, in places, heavy vegetation. Exposures of bedrock are rare, although outcrops probably are present within each square mile of the area. The conditions of soil cover and vegetation may in the past have contributed to the lack of a thorough geological examination of the area, but with modern transport and techniques there is no reason why the area cannot be explored completely.

Weather and Climate

Tasmania as a whole has a climate not unlike that of the British Isles. The licence area is located in the northeast, the driest part of Tasmania. The Department of Mines suggests that the weather in and around the licence area is generally not such as to seriously hamper exploration programs, and no large scale seasonal weather delays need be expected.

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GEOLOGY

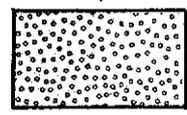
Northeastern Tasmania is dominated by extensive intrusions of granite batholiths and stocks, which invaded Ordovician and Silurian limestones, shales, and sandstones late in Devonian time (Fig.3). According to previous reconnaissance surveys of the licence area, the intruded rock "is an equigranular hornblende-biotite granodiorite with granodiorite porphyry at some contacts. Quartz feldspar porphyry outcrops on Diddleum Plains near the St. Patricks River, but its relation to the main granite is unknown." (Longman, 1966). The instrusions, from what is now known from field studies, were progressive, and several phases may be recognizable, although these have not yet been mapped. In the intrusive process, the intruded Paleozoic rocks were contorted and metamorphosed. In a number of places they, as well as the granites themselves, were mineralized, mainly with tin, tungsten, zinc, lead, and molybdenite. A number of these concentrations are of economic value and have been mined for many years.

A portion of an early report on the pertinent part of this subject is appended here; it is titled Tungsten and Molybdenum, and was the first part of Tasmania Department of Mines Geological Survey Mineral Resources Bulletin No.1, published in 1916. It describes a survey made as a result of the great need for these metals during the early years of the first World War.

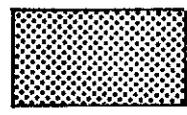
In northeastern Tasmania, as in other parts of the world, the three minerals cassiterite (tin), wolframite (tungsten), and molybdenite (molybdenum) are genetically associated wherever they occur in granitic associations. In the United States, for example, the Climax occurrence of molybdenite produces tin and tungsten as by-products. Placer tin has been

TASMANIA

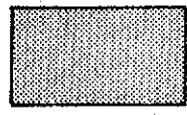
GEOLOGICAL REFERENCE



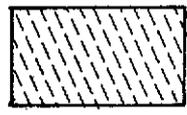
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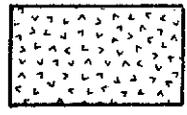
PERMIAN



TRIASSIC



DEVONIAN AND SILURIAN



TERTIARY *Basalt*



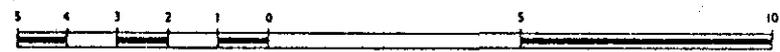
JURASSIC *Dolerite*



DEVONIAN *Granite*

IGNEOUS

SCALE



MILES

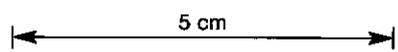


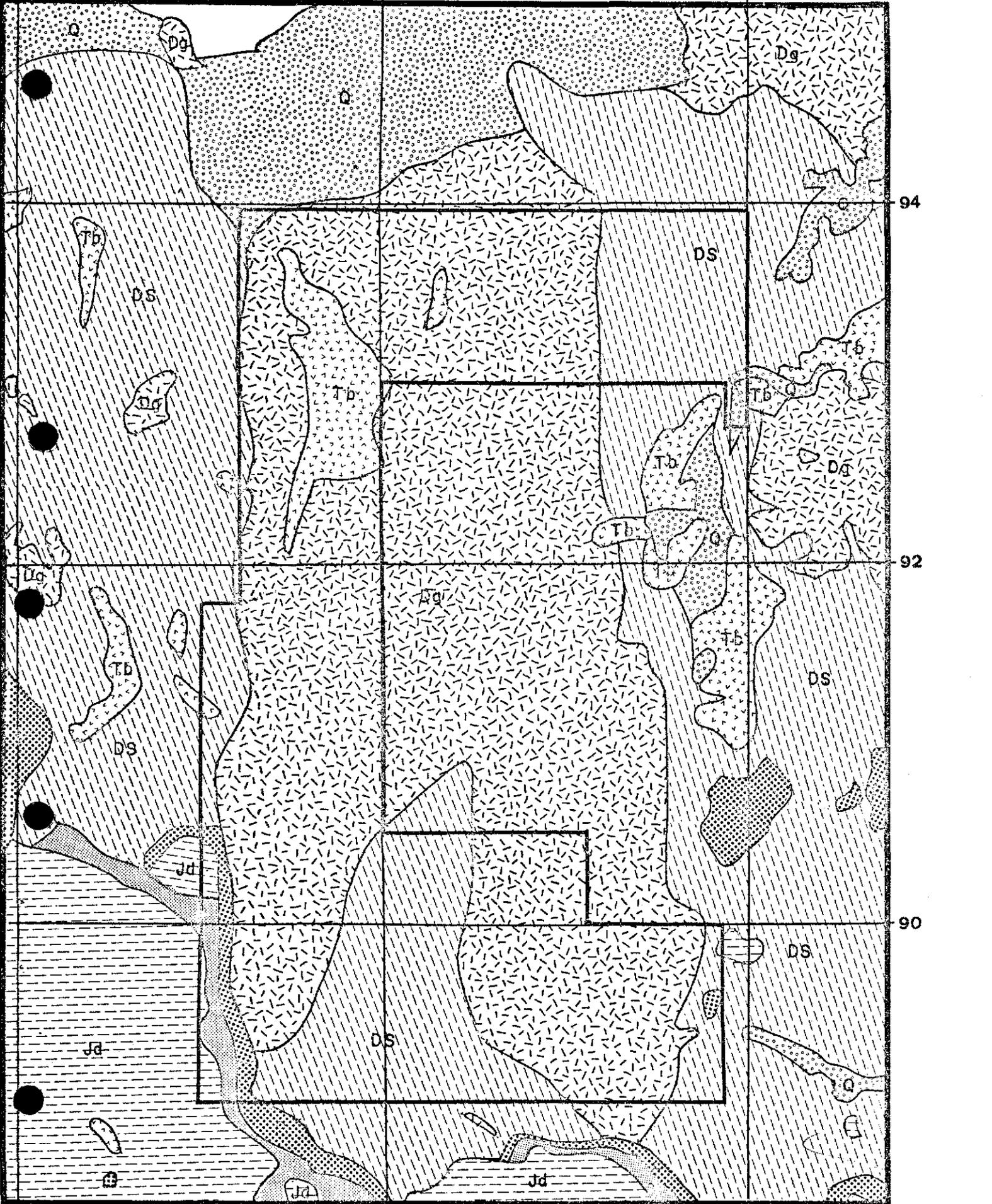
Figure 3. - Generalized Geologic Map of Oceanic Exploration Company's metallic minerals Licence Area adapted from Geologic Map of Tasmania.

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produced in northeastern Tasmania for many years; several placer mines still operate within the present licence area. This tin is undoubtedly derived from the adjacent Devonian granites within the licence area. Some wolframite has been produced from the placer ground, but molybdenite is too soft for placer concentration, and has not been mined here.

Dr. David ⁰Graves, of the Geological Survey of the Tasmania Department of Mines, is at present mapping the granites of a large area east of this licence. He has found molybdenite in small but recognizable concentrations, widespread in its occurrence around and especially to the east of Scottsdale. At Mt. Stronach, about one mile east of this town, molybdenite occurs in concentrated masses or 'splashes' in the granite, as described in the appended publication. Mt. Stronach is not within the licence area, but the Oceanic licence boundary line is within a mile of that occurrence. A mining lease on Mt. Stronach is at present held by a local prospector who works it on a weekend basis and does not produce appreciable ore.

PROPOSED EXPLORATION PROGRAM

In view of what is now known of the area, and of the possibility of finding large-volume low-concentration deposits of molybdenum or associated metals there, the following exploration program was proposed to the Tasmania Department of Mines:

1. Ground reconnaissance mapping of the entire area, except that already completed by the Department, at a scale of 1 to 100,000, to eliminate completely unpromising peripheral and other areas from further consideration. This will be done using aerial photographs and skilled geologists who are familiar with granite terrain and sulfide mineralization.

Estimated cost: \$10,000.

2. Geochemical orientation study of a local mineralized area, to indicate the kind of sample and method of sampling best suited to the regional survey.

Estimated cost: \$ 2,000.

3. Regional geochemical survey, consisting of:

- a. Stream sampling on a 1/3 mile basis, as follows:

1. Normal sampling of silt and sand fraction from stream bottom.
2. Panned concentrate of heavy fraction of stream bottom material.

- b. Concurrent soil sampling on ridges between stream drainages on same spacing as stream sampling.

Estimated cost: \$25,000.

All samples collected in this program would be run for molybdenum, tin and tungsten.

4. Airborne scintillation and magnetometer survey over the regional geochemical anomalies. This survey would search for the areas of high

feldspar content (radiogenic potassium 40) correlated with areas where ferromagnesian minerals have been destroyed by alteration (magnetic lows) and geochemical molybdenum highs.

Estimated cost: \$15,000.

At this point, selection of the best areas for further exploration will be made. Geochemical anomalies which do not show up well on the airborne survey will be further examined on the ground at this time. Selected areas will then be explored as follows; no estimation of costs is given here as this will be entirely dependent on the extent and number of areas investigated.

5. Geological mapping at a scale of about 1 to 20,000, with particular attention given to determining whether the anomalies are associated with intrusives, what kind they are, and what textures they contain. Hypabyssal textures have been found to be best for molybdenum mineralization, and these will be examined first in the next phase of exploration.
6. Detailed geochemical sampling and analysis at 500 foot intervals if the anomaly is large, 200 if it is small.
7. Detailed geological mapping of areas showing promise in the previous examination, at 1 to 2,500 or larger scale. In this work it may be necessary to bulldoze or trench the surface to provide adequate rock exposures.
8. Detailed geophysical surveying of the high-potential areas remaining. This will consist of an induced polarization survey which has quite high sensitivity to concentrations of 1 to 5% total sulfides. Only areas which suggest large open-pit tonnage potential will be surveyed in this manner.
9. Diamond drilling of remaining areas, if any, having favorable geological, geophysical, and geochemical characteristics. Each target selected here will be tested with at least 1,000 feet of drilling.

- 11 -

It is impossible to outline further work beyond this stage except to say that if conditions warrant, a large drilling program run concurrently with a mining feasibility study would be in order.

This program, which accompanied the letter of application for the licence, was accepted by the Department and the licence was issued on the basis that the program would be followed. In addition, the Department of Mines made several stipulations in the licence which they issued, primarily that Oceanic shall employ two or more men continuously, and shall furnish the Department of Mines with complete records and a set of rock and core samples. These specific requirements must be met if the licence is to remain in force. (A copy of the licence is appended.)

Naturally, this program will take considerable time, and may of course be stopped whenever conditions do not warrant continuation. I have discussed the time allowances with the Department of Mines, and they are willing to continue our licence as long as a reasonable exploration program is being carried out.

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REFERENCES

Banks, M. R. (1965) Geology and Mineral Deposits, from Atlas of Tasmania, Mercury Press, Hobart.

Jennings, I. B., Noldart, A. J., and Williams, E. (1967) Geology and Mineral Resources of Tasmania, Tasmania Department of Mines Geological Survey Bulletin No. 50.

Longman, M. J. (1966) Geological Survey Exploratory Report, one mile geological map series, Launceston sheet, Tasmania Department of Mines.

015

Tasmania

DEPARTMENT OF MINES

GEOLOGICAL SURVEY MINERAL
RESOURCES

No. 1

Tungsten and Molybdenum

Part I.

NORTH-EASTERN AND EASTERN TASMANIA

BY

LOFTUS HILLS, M.Sc., Assistant Government Geologist

Issued under the authority of
The Honourable J. E. OGDEN, Minister for Mines



Tasmania:

J. N. VAIL, GOVERNMENT PRINTER, HOBART

1916

OCCURRENCES OF WOLFRAM AND MOLYBDENITE IN NORTH-EASTERN AND
EASTERN TASMANIA

Molybdenite at Mt. Stronach.

Mt. Stronach is situated about 3 miles east of the Scottsdale railway-station. It is reached by means of the main-road, from which a branch road leads to the foot of the mountain at 1 1/2 mile from the township. A foot track is available to the summit of the mountain.

The whole of the mountain is composed of varying facies of Devonian granite. The occurrences of molybdenite are situated on the higher parts of the mountain and the western fall, no molybdenite having been observed on the eastern side.

There is only one mineral section held for molybdenite in this district, and that is a reward section granted to G.L. Meredith, numbered 6948-M, with an area of 37 acres. It is situated on the western fall of the mountain, in the vicinity of the track leading to the summit. The only work done has consisted of a few shots put on a rather steep, smooth face of granite showing occasional splashes of molybdenite. These splashes vary in size from mere specks to masses a little more than half-an-inch in diameter. It is observed that wherever the molybdenite occurs in the granite at this point it has a reddish tinge, although both the rock carrying the molybdenite and that free from it are normal biotite granites. The molybdenite occurs as a primary constituent of the rock, no sign of any variation in the rock accompanying the appearance of the molybdenite. Its occurrence in the rock is identical with that of the mica, with which at times it is confused. One sample collected from the locality shows quite clearly an intergrowth of felspar and molybdenite. There occur in this vicinity small irregular veins of pegmatite, but these do not seem to carry appreciable molybdenite, only one sample found by the writer showing that mineral. However, so little work has been done that no definite opinion on the matter can be expressed, for it is in these veins that workable deposits of molybdenite may be found. To indicate the approximate contents of molybdenite in the granite on this section as visible on the surface, an area of 9 square feet, which showed the most plentiful molybdenite, was found to carry not more than 1 square inch of that mineral. That is equivalent to, approximately, 0.09 per cent. MoS_2 , which represents a gross value of about 9s. per ton, a value which is obviously unpayable.

Further up the mountain, a little to the west of the track, and on Crown land, occurs a well-defined pegmatite dyke, showing large felspar and mica crystals. This is known locally as "The Blow". Molybdenite occurs here, not in the pegmatite, but in the granite surrounding it. A few shots put in show the mineral to be well disseminated, but again nothing approaching a payable deposit can be seen. It is remarkable that the pegmatite contains no molybdenite but it seems as if in this case also the latter is an original constituent of the biotite granite, and is not connected with the subsequent intrusion of the pegmatite.

On the summit of the mountain there is an area of about 5 acres, which carries splashes of molybdenite, some of appreciable size, up to about 3/4 inch, but there is no one spot where the general average is exceeded. The percentage would be somewhat less than that described on G. L. Meredith's-Reward Section. Here, again, it is an original constituent of the granite, and no definite concentration of it exists.

Going southwards round the mountain from G. L. Meredith's section, the bare cliff-like face of granite is found to be continuous, and splashes of molybdenite occur constantly, but in no place more than that on the section described. It may, therefore, be regarded as unpayable, and not warranting further attention.

On the western slope of the mountain immediately west of the pinnacle, on a vacant block of land 69a. 2r. 39p. in area situated north of the rifle range, is what is known as Harvey's show. At this point some work has been done under a prospecting licence, but no mineral area has been taken up to include the locality. There occurred at this point an outcrop, showing a few splashes of molybdenite. A few shots put in disclosed siliceous granite carrying chalcopyrite, pyrite, and molybdenite, the latter occurring in a prominent seam 1 inch to 2 inches wide in the centre of the formation. This was sunk on for about 10 feet, which showed the siliceous and pyritic formation to be widening, with no walls showing, the molybdenite seam still persisting. In the south side of the cut there can now be seen two well-defined vertical "heads" or fractures in normal granite, striking N.30°W., 4 feet apart. The granite for a few inches on either side of these fractures shows some alteration, indicating clearly that they have been passages for solutions. The surrounding rock is the normal granite. There has not been sufficient work done to clearly show what the formation is, but it looks as if there exists at this point a pipe-like mass of siliceous material consisting of quartz and felspar, of undetermined dimensions, carrying appreciable values in molybdenite, copper and silver. Samples submitted to the Government Assayer at the time the deposit was opened up gave the following results:

	Copper per cent.	Silver oz.	Gold
Sample No. 1... ..	4.1	6.5	Trace
Sample No. 2... ..	3.3	6.0	Trace

These figures cannot be taken, of course, to represent the value of the deposit as a whole, but there is no doubt that the values in molybdenite alone are sufficient to warrant further work being done. The copper and silver values will be additional to the molybdenite, but their presence entails additional metallurgical treatment, which, however, as will be shown in Chapter IV., cannot be regarded as insuperable.

Finally, therefore, in connection with the occurrences of molybdenite on Mt. Stronach, it may be stated that with the exception of one occurrence, there is no deposit which would justify further attention, and although there is a considerable amount of molybdenite scattered over the western slopes of the mountain, yet the obtaining of the whole of it would involve the removal of most of the mountain, an obviously unprofitable undertaking. The one exception referred to is Harvey's show, which decidedly warrants further

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attention, and the writer would recommend that it be opened up by approaching it from lower down the slope. The extent and exact character of the formation will thus be seen, and the value determined sufficiently closely to decide the future policy. It is certainly the only occurrence on the mountain which warrants present attention.

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TASMANIA

No. 22/70

(Regulation 6A)

THE MINING ACT 1929

EXPLORATION LICENCE UNDER SECTION 15B

ISSUED to Thomas Vogenthaler of C/- Professor J. Chronic,
 Oceanic Exploration Company,
 188 Whale Beach Rd. Avalon Beach, NSW
 in respect of 200 square miles of land in the Land District of Dorset and Cornwall
 vicinity of Diddleum Plains as described in the schedule hereto.

This licence shall remain in force until the 2nd day
 of October, 1970.

This licence is subject to the following conditions:—

1. That the licensee shall immediately on the issue of this licence take steps to commence preliminary works necessary for the investigation of the area.
2. That the licensee shall carry out investigations as may be necessary to determine the mineral potential of the area in general accordance with the programme contained in the letter of application dated 6th March 1970 submitted on behalf of the licensee by Oceanic Exploration Company.
3. That the licensee shall employ such technical and other staff, not being less than two men continuously, and equipment as may be necessary effectively to carry out such prospecting and survey.
4. That the licensee shall furnish the Director of Mines, Hobart, with complete records including plans of boring and other work within the compass of the programme of exploration. Such records and plans shall be held for official purposes during such time as the areas involved are lawfully held by the licensee or as otherwise agreed to.
5. A split of core samples shall be boxed or packaged in an approved manner and conveyed to a site approved by the Director of Mines prior to the expiration of this licence.
6. If required by the Director of Mines, the licence holder will forward duplicate samples of rock and mineral samples obtained in the licence area to a place approved by the Director of Mines.
7. That a Statement of Expenditure verified by statutory declaration shall be lodged with the Director of Mines, Hobart at the end of each calendar month from the date of this licence.
8. That such Statement shall be accompanied by a progress report of operations.
9. This licence shall apply to metallic minerals.
10. All large or deep excavations particularly those made by bulldozer or other earth moving equipment shall be filled in or otherwise made safe in accordance with the Mines Inspection Act, 1968, when no longer required.
11. The licensee shall observe any instructions which may be given by the Director of Mines with a view of minimising or preventing damage to public or private property.

- 12. If it is found that the operations hereby authorised are causing any undue damage to or erosion of the subject land or other land in the vicinity thereof the Minister may cancel the licence without compensation to the licensee by giving seven days notice in writing of his intention so to do.
- 13. The licensee shall not light any fires without the approval of the Rural Fires Board or other relevant Authority.
- 14. Where any aboriginal relic or objects of historic interest is discovered operations shall be conducted so as not to damage or interfere with such site or object and details of such discovery must be reported to the Director of Mines.
- 15. The licensee shall notify the local representative of the Forestry Commission before entering on a State Forest and shall comply with the reasonable requirements of such officer in operations on any such State Forest.

SCHEDULE

Commencing at the posted notice situate at the south west corner of area applied for whose grid co-ordinates are 890,000 yards N 530,000 yards E thence due east to 558,500 yards E due north to 900,000 yards N due west to 551,000 yards E again due north to 905,000 yards N again due west to 540,000 yards E again due north to 930,000 yards N again due east to 558,500 yards E aforesaid due south to 927,500 yards N again due east to 560,000 yards E again due north to 939,500 yards N again due west to 532,000 yards E again due south to 917,800 yards N again due west to 530,000 yards E aforesaid and again due south to the point of commencement.

The area embraced by this licence shall be exclusive of all municipal and public reserves and roadways, leases, water licences, easement licence, special and exploration licences, prospectors licences and miners' rights issued under the Mining Act, 1929, and which is in the lawful possession or occupation of any person or which is marked out prior to the date of marking out of this licence, land exempt from the provisions of the Mining Act, 1929, scenic reserves and other Crown Reservations and other land set apart or dedicated for any public purpose.

W. B. ...
 MINISTER FOR MINES
 2nd April, 1970.

Minister for Mines

Date.....

21

Extracts from the Provisions of the Mining Act 1929

Exploration Licences

SECTION 15a (3) An exploration licence—

- I Has effect in relation to such area, and for such period, as the Minister may determine:*
 - II Shall be granted upon and subject to such terms and conditions as are prescribed in this section and such other terms and conditions (including conditions as to the fees and rent to be paid by the holder thereof) as the Minister may determine:*
and
 - III While in force, has effect to authorize the holder thereof, subject to the observance of the terms and conditions thereof and to the provisions of this Act, to enter upon and pass over or across Crown Lands and, subject to subsection (5) of this section, private lands, within the area to which it relates, and to prospect and search thereon for such mining products as may be specified in the licence and to do all such other acts and things as may be reasonably necessary to enable the holder thereof to engage in large scale exploration work.*
- (4) The holder of an exploration licence shall, subject to this Act—
- I Engage, to the satisfaction of the Minister, in such aerial, geological, or geophysical surveys and exploration as the Minister may direct or approve:*
 - II Furnish the Director with such periodical reports and returns as the Minister may direct or approve:*
and
 - III Keep an adequate record of all operations conducted under the authority of the licence, and at all reasonable times permit the Director, or any officer authorized by the Director so to do, to examine those records and inspect any specimens or materials obtained in the course of those operations.*
- (5) The holder of an exploration licence shall not enter on private land thereunder unless he has given security as provided in subsection (2) of section seventy, and, upon entering on private land, is subject to sections seventy-one and seventy-two, as if his exploration licence were a permit under section seventy.
- 15c (6) Upon application made in that behalf by the holder of a special prospector's licence or of an exploration licence before the expiration of the period for which it is granted to have effect the Minister may extend the licence for such further period or periods, and upon such conditions, as he thinks fit but so that, in the case of a special prospector's licence, the aggregate period for which the licence is, and all extensions thereof are, granted, does not exceed twelve months.
- (7) Where a licence is extended pursuant to subsection (6) of this section, the Minister may—
- I On the recommendation of the Director, add to: or*
 - II Reduce the area of land comprised in the licence.*
- (8) If the holder of a special prospector's licence or of an exploration licence contravenes or fails to comply with any of the provisions of this Act or any of the terms and conditions to which the licence is subject, the Minister may, by notice in writing to the holder, revoke the licence.
- (9) With the consent of the holder of a special prospector's licence or an exploration licence—
- I A prospector's licence, mining lease, water licence, or easement licence may be granted in respect of land comprised therein as if the special prospector's licence or exploration licence did not exist: and*
 - II A Miner's right may be exercised as if the land comprised in the special prospector's licence or exploration licence were unoccupied land.*
- (10) Special Prospectors' licences and exploration licences may, with the consent of the Minister, be transferred as prescribed on payment of the prescribed Fee.

REGULATION 4 (5) Where application is made for a special prospector's licence or an exploration licence, and a licence is granted thereon in respect of an area less than that comprised in the application, the holder, within seven days after the issue of such licence, shall affix to his datum-post an amended notice, showing the area which he is authorized to prospect.

022



amdel

The Australian Mineral Development Laboratories

Flemington Street, Frewville, South Australia 5063
Phone 79 1662, telex AA82520

Please address all correspondence to the Director
In reply quote: **AN3/612/0 - 4494/71**

10 May 1971

Mr R.J. Coleman
Oceanic Exploration Co
PO Box 29
MARGATE Tss 7153

REPORT AN4494/71

YOUR REFERENCE:	Letter dated 13/4/71
MATERIAL:	Stream sediment
IDENTIFICATION:	DP1 to DP18 and S1 to S147
DATE RECEIVED:	15/4/71
NOTE:	The first consignment of samples, UB1 to UB37, arrived with all broken packets, the samples mixed and was unsuitable for analysis.

Enquiries quoting AN4494/71 to Officer in Charge please.

Spectrographic analysis by: R.R. Robinson

Officer in Charge, Analytical Section: A.B. Timms

FRH
for F.R. Hartley
Director

pkm

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Semi-Quantitative Spectrographic Analysis

803024

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

x = not detected at the limits quoted

REPORT AN 4494/71

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
DP 1	1	x	x	20	x	100	x	x	1	30
2	1	x	x	10	x	20	x	x	1	20
3	3	x	3	10	x	40	x	x	1	20
4	1	x	x	8	x	x	x	x	x	40
5	3	x	x	8	x	20	x	x	1	20
6	x	x	3	5	x	20	x	x	1	30
7	x	x	x	1	x	x	x	x	x	40
8	x	x	x	8	x	x	x	x	1	30
9	1	x	x	10	x	30	x	x	1	30
10	x	x	x	5	x	30	x	x	1	20
11	1	x	x	3	x	30	x	x	x	20
12	1	x	3	20	x	30	x	x	x	30
13	x	x	x	3	x	x	x	x	3	10
14	1	x	5	20	x	30	x	x	1	30
15	1	x	x	5	x	20	x	x	1	40
16	1	x	x	3	x	20	x	x	1	20
17	1	x	x	5	x	30	x	x	1	20
18	1	x	x	5	x	20	x	x	3	20
S 1	1	x	3	5	x	x	x	x	x	100
2	x	x	x	10	x	x	x	x	x	15
3	50	x	3	10	x	x	x	x	1	10
4	80	x	x	10	x	20	x	x	2	x
5	5	x	x	1	x	20	x	x	1	x
6	8	x	x	2	x	20	x	x	1	x
7	x	x	x	1	x	20	x	x	1	10

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique

024

Semi-Quantitative Spectrographic Analysis

2.

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803025

x = not detected at the limits quoted

REPORT AN 449471

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
5	8	x	x	2	x	x	x	x	1	x
9	x	x	x	3	x	x	x	x	x	10
10	15	x	x	3	x	x	x	x	x	10
11	x	x	x	5	x	x	x	x	1	10
12	10	x	x	5	x	x	x	x	x	x
13	8	x	x	10	x	x	x	x	x	x
14	3	x	3	15	x	x	x	x	1	10
15	80	x	x	8	x	x	x	x	x	15
16	150	x	3	10	x	x	x	x	1	30
17	800	x	x	10	x	x	x	x	1	30
18	1	x	x	10	x	x	x	x	1	10
19	120	x	x	5	x	x	x	x	3	15
20	1	x	x	10	x	x	x	x	x	x
21	150	x	3	15	x	x	x	x	x	x
22	8	x	3	15	x	x	x	x	x	x
23	1	x	x	8	x	x	x	x	x	x
24	x	x	x	5	x	x	x	x	x	x
25	30	x	x	2	x	x	x	x	x	x
26	20	x	x	2	x	x	x	x	1	x
27	250	x	x	3	x	x	x	x	1	x
28	x	x	x	2	x	x	x	x	2	10
29	1	x	x	8	x	x	x	x	2	10
30	1	x	x	3	x	x	x	x	2	10
31	1	x	x	3	x	x	x	x	3	20
32	3	x	x	8	x	x	x	x	3	25

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate method.

025

3.

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

x = not detected at the limits quoted

REPORT AN 449471

803026

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
S 33	1	x	x	3	x	x	x	x	1	10
34	3	x	x	10	x	x	x	x	x	10
35	1	x	x	10	x	40	x	x	x	x
36	2	x	3	8	x	x	x	x	1	20
37	20	x	x	15	x	40	x	x	2	30
38	1	x	x	20	x	20	x	x	1	80
39	1	x	x	8	x	x	x	x	x	x
40	1	x	x	5	x	x	x	x	1	10
41	1	x	x	8	x	x	x	x	1	x
42	1	x	x	5	x	x	x	x	1	x
43	10	x	3	10	x	x	x	x	2	x
44	200	x	x	10	x	x	x	x	5	15
45	8	x	3	10	x	x	x	x	3	10
46	80	x	3	10	x	x	x	x	5	10
47	3	x	3	15	x	20	x	x	10	100
48	1	x	x	20	x	x	x	x	10	80
49	8	x	x	20	x	100	x	x	10	60
50	5	x	x	20	x	x	x	x	10	60
51	3	x	x	10	x	x	x	x	8	15
52	3	x	3	15	x	x	x	x	5	10
53	8	x	x	10	x	x	x	x	5	10
54	20	x	x	10	x	x	x	x	8	20
55	15	x	x	10	x	x	x	x	5	10
56	5	x	x	8	x	x	x	x	2	10
57	1	x	x	5	x	x	x	x	5	20

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be re-detected by an appropriate analytical technique.

026

4

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803027

x = not detected at the limits quoted

REPORT AN 4494/71

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
S 58	1	X	X	5	X	X	X	X	3	20
59	1	X	X	8	X	X	X	X	5	20
60	1	X	X	8	X	X	X	X	3	15
61	1	X	X	5	X	X	X	X	5	20
62	1	X	X	10	X	X	X	X	3	20
63	5	X	X	10	X	X	X	X	5	10
64	1	X	X	10	X	X	X	X	5	10
65	15	X	3	10	X	X	X	X	3	10
66	3	X	X	10	X	X	X	X	3	15
67	1	X	X	10	X	X	X	X	3	15
68	3	X	3	15	X	20	X	X	3	30
69	2	X	X	15	X	20	X	X	2	30
70	2	X	X	20	X	X	X	X	2	30
71	2	X	X	10	X	X	X	X	3	40
72	1	X	X	10	X	X	X	X	2	30
73	3	X	X	10	X	20	X	X	5	20
74	8	X	3	10	X	X	X	X	5	15
75	10	X	3	10	X	X	X	X	5	10
76	8	X	3	8	X	X	X	X	2	10
77	10	X	3	8	X	X	X	X	2	10
78	8	X	X	8	X	X	X	X	2	10
79	5	X	3	5	X	X	X	X	3	10
80	5	X	X	8	X	X	X	X	2	10
81	X	X	3	5	X	X	X	X	2	15
82	1	X	X	5	X	X	X	X	2	15

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate method.

Semi-Quantitative Spectrographic Analysis
THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

x = not detected at the limits quoted

REPORT AN 4494171

803028

FORM 91 Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
83	3	x	x	8	x	x	x	x	3	10
84	1	x	x	5	x	x	x	x	3	20
85	1	x	x	5	x	x	x	x	2	10
86	x	x	3	5	x	x	x	x	2	x
87	x	x	x	3	x	x	x	x	1	10
88	x	x	3	5	x	x	x	x	1	10
89	1	x	3	5	x	x	x	x	1	x
90	1	x	5	3	x	x	x	x	1	x
91	1	x	x	3	x	x	x	x	1	x
92	3	x	x	5	x	x	x	x	1	x
93	3	x	x	8	x	x	x	x	1	x
94	x	x	x	5	x	x	x	x	1	x
95	x	x	3	5	x	x	x	x	1	40
96	1	x	x	10	x	x	x	x	x	10
97	1	x	x	5	x	x	x	x	x	x
98	1	x	x	8	x	x	x	x	1	30
99	15	x	3	8	x	x	x	x	3	30
100	x	x	x	8	x	x	x	x	3	30
101	1	x	x	10	x	20	x	x	3	x
102	1	x	3	3	x	x	x	x	3	x
103	x	x	x	3	x	x	x	x	2	x
104	x	x	x	3	x	x	x	x	2	10
105	x	x	x	10	x	x	x	x	2	x
106	x	x	x	5	x	x	x	x	2	x
107	3	x	x	10	x	x	x	x	1	10

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be re-detected by a more sensitive method.

028

6.

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

x = not detected at the limits quoted

REPORT AN 4494/11

803029

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
5108	x	x	3	3	x	x	x	x	1	10
109	x	x	3	5	x	x	x	x	x	10
110	x	x	3	8	x	20	x	x	x	x
111	x	x	x	5	x	x	x	x	1	10
112	x	x	3	3	x	x	x	x	1	10
113	x	x	x	10	x	20	x	x	1	10
114	x	x	x	10	x	x	x	x	1	10
115	x	x	x	8	x	x	x	x	2	x
116	x	x	x	8	x	x	x	x	x	10
117	x	x	x	10	x	x	x	x	x	10
118	x	x	x	10	x	x	x	x	x	10
119	2	x	3	8	x	x	x	x	1	10
120	x	x	3	5	x	x	x	x	1	10
121	x	x	3	5	x	x	x	x	1	20
122	5	x	x	8	x	x	x	x	1	10
123	1	x	x	8	x	x	x	x	2	10
124	15	x	x	8	x	x	x	x	1	10
125	1	x	x	8	x	x	x	x	2	10
126	x	x	3	10	x	x	x	x	2	30
127	x	x	x	5	x	x	x	x	1	10
128	x	x	x	5	x	x	x	x	2	15
129	x	x	x	8	x	x	x	x	1	15
130	x	x	x	3	x	x	x	x	2	20
131	x	x	3	5	x	x	x	x	1	15
132	8	x	3	8	x	x	x	x	3	10

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be re-determined by more accurate analytical techniques.

029

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803030

x = not detected at the limits quoted

REPORT AN 4494/71

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	Sn (1)	W (50)	Mo (3)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Be (1)	V (10)
S133	3	x	x	10	x	x	x	x	3	10
134	100	x	x	15	x	40	x	x	3	10
135	1	x	5	10	x	x	x	x	3	15
136	3	x	10	3	x	x	x	x	1	x
137	SAMPLE NOT RECEIVED									
138	x	x	x	20	x	x	x	x	2	x
139	1	x	x	3	x	x	x	x	1	x
140	x	x	x	3	x	x	x	x	3	10
141	1	x	x	5	x	x	x	x	3	20
142(a)	x	x	x	3	x	x	x	x	3	15
142(b)	x	x	3	3	x	x	x	x	1	10
143	1	x	x	3	x	x	x	x	3	10
144	1	x	x	5	x	x	x	x	2	15
145(a)	1	x	x	5	x	x	x	x	1	x
145(b)	1	x	15	5	x	x	x	x	x	x
146	5	x	3	3	x	30	x	x	10	x
147	10	x	10,000	25	x	x	x	x	10	x
EQ. A1+A2 (166 x 10) = 1,660										

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate method.

030



amdel
The Australian Mineral Development Laboratories

Flemington Street, Frewville, South Australia 5063
Phone 79 1662, telex AAB2520

Please address all correspondence to the Director
In reply quote: **AN3/612/0 - 5081/71**

8 June 1971

Mr R.J. Coleman
Oceanic Exploration Company
PO Box 29
MARGATE Tas 7153

REPORT AN5081/71

YOUR REFERENCE:	Letter dated 15/5/71
IDENTIFICATION:	UB1 to UB62
DATE RECEIVED:	20/5/71

Enquiries quoting AN5081/71 to Officer in Charge please.

Spectrographic Analysis by: R.R. Robinson

Officer in Charge, Analytical Section: A.B. Timms

F.R. Hartley
for F.R. Hartley
Director

Jw

031

JOB 5081.171

AMDEL ANALYTICAL SERVICE

Semi-Quantitative Spectrographic Analysis Scheme A1

BATCH ...

Form 25

Results in ppm unless otherwise stated. Detection limits in brackets.

	Sample No.	Co (5)	Ni (5)	Cr (20)	V (10)	W (50)	Mo (3)	Mn (10)	Ta (100)	Nb (20)	Be (1)	Th (100)
1	1	10	30	100	40	x	3	300	x	x	3	x
2	2	10	10	80	40	x	3	250	x	x	3	x
3	3	5	10	80	30	x	x	250	x	x	3	x
4	4	5	15	60	30	x	x	200	x	x	3	x
5	5	5	10	40	20	x	3	120	x	x	3	x
6	6	5	10	80	40	x	3	200	x	x	3	x
7	7	5	15	60	40	x	x	250	x	x	3	x
8	8	10	15	80	40	x	x	300	x	x	3	x
9	9	10	20	100	60	x	x	300	x	x	3	x
10	10	10	20	80	80	x	x	400	x	x	3	x
11	11	20	30	100	150	x	x	600	x	x	3	x
12	12	10	30	80	120	x	3	250	x	x	3	x
13	13	20	30	100	100	x	3	350	x	x	3	x
14	14	30	30	120	120	x	3	400	x	x	1	x
15	15	30	30	150	120	x	3	400	x	x	1	x
16	16	30	30	150	150	x	3	400	x	x	3	x
17	17	20	20	150	120	x	x	350	x	x	3	x
18	18	20	30	150	100	x	3	600	x	x	3	x
19	19	20	20	120	100	x	3	600	x	x	3	x
20	20	30	30	150	120	x	3	600	x	x	1	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803032

032

AMDEL ANALYTICAL SERVICE

JOB .508171

1-Quantitative Spectrographic Analy Scheme A1

BATCH ...2.....

Form 25

Results in ppm unless otherwise stated. Detection limits in brackets.

	Sample No.	Co (5)	Ni (5)	Cr (20)	V (10)	W (50)	Mo (3)	Mn (10)	Ta (100)	Nb (20)	Be (1)	Th (100)
1	UB 21	10	20	100	120	x	x	250	x	x	3	x
2	22	20	30	80	100	x	x	350	x	x	5	x
3	23	5	10	120	40	x	x	250	x	x	1	x
4	24	10	20	150	100	x	x	1,000	x	30	3	x
5	25	10	20	40	40	x	x	300	x	x	3	x
6	26	5	10	120	40	x	3	80	x	x	1	x
7	27	5	20	120	40	x	5	150	x	x	3	x
8	28	10	10	80	40	x	x	150	x	x	5	x
9	29	5	5	100	30	x	3	200	x	x	3	x
10	30	5	5	100	20	x	x	180	x	x	3	x
11	31	5	5	150	40	x	3	180	x	20	3	x
12	32	5	5	30	10	x	x	200	x	x	3	x
13	33	5	10	40	10	x	3	180	x	x	3	x
14	34	5	20	80	20	x	3	300	x	x	3	x
15	35	20	20	120	120	x	x	200	x	x	3	x
16	36	20	20	120	100	x	x	200	x	x	3	x
17	37	10	30	100	80	x	x	200	x	x	3	x
18	38	10	30	150	100	x	3	200	x	x	3	x
19	39	20	40	120	120	x	3	200	x	x	3	x
20	40	5	10	80	20	x	3	150	x	x	1	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803033

033

AMDEL ANALYTICAL SERVICE

JOB .5081.71

i-Quantitative Spectrographic Analy Scheme A1

BATCH ...3:.....

Form 25

Results in ppm unless otherwise stated. Detection limits in brackets.

	Sample No.	Co (5)	Ni (5)	Cr (20)	V (10)	W (50)	Mo (3)	Mn (10)	Ta (100)	Nb (20)	Be (1)	Th (100)
1	41	5	10	100	30	x	x	120	x	x	1	x
2	42	5	20	100	30	x	5	120	x	x	2	x
3	43	5	15	100	40	x	3	150	x	x	3	x
4	44	5	10	150	80	x	3	80	x	x	3	x
5	45	5	30	80	20	x	x	100	x	x	5	x
6	46	5	5	80	20	x	x	80	x	x	5	x
7	47	5	10	100	10	x	x	100	x	x	3	x
8	48	5	5	100	10	x	x	100	x	x	3	x
9	49	10	10	150	80	x	x	200	x	x	3	x
10	50	10	10	120	60	x	x	180	x	20	3	x
11	51	5	10	120	60	x	x	200	x	20	3	x
12	52	5	10	100	60	x	x	200	x	20	3	x
13	53	5	10	120	20	x	x	180	x	x	2	x
14	54	20	10	100	30	x	x	180	x	x	3	x
15	55	20	20	120	100	x	x	200	x	x	3	x
16	56	40	30	120	100	x	x	200	x	x	3	x
17	57	40	30	150	120	x	x	250	x	x	3	x
18	58	40	40	150	120	x	x	200	x	x	3	x
19	59	40	40	200	150	x	x	200	x	x	3	x
20	60	60	80	300	150	x	3	300	x	x	3	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803034

AMDEL ANALYTICAL SERVICE

JOB 5081(7)

Semi-Quantitative Spectrographic Analysis Scheme A1

BATCH ...4.....

034

Form 25

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No.	Co (5)	Ni (5)	Cr (20)	V (10)	W (50)	Mo (3)	Mn (10)	Ta (100)	Nb (20)	Be (1)	Th (100)	
1	4861	40	60	150	150	x	x	250	x	x	3	x
2	62	30	40	120	120	x	x	350	x	x	3	x
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803035

Results in p.p.m unless otherwise stated. Detection limits in brackets

Sample No.	Pt (10)	Pd (10)	Os (10)	Ir (2)	Rh (2)	Ru (2)							
1 481 → 10	X	X	X	X	X	X							
2 11 → 20	X	X	X	X	X	X							
3 21 → 30	X	X	X	X	X	X							
4 31 → 40	X	X	X	X	X	X							
5 41 → 50	X	X	X	X	X	X							
6 51 → 62	X	X	X	X	X	X							
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

035

803036

JOB .508171
Form 23

AMDEL ANALYTICAL SERVICE

Quantitative Spectrographic Analysis Scheme A2
Results in ppm unless otherwise stated. Detection limits in brackets.

BATCH ... 6.

030

Sample No.	Cu (0.5)	Pb (1)	Zn (20)	Sn (1)	Cd (3)	Bi (1)	Ag (0.1)	Au (3)	Ga (1)	Ge (1)	As (50)	Sb (30)
1	481	5	5	x	x	x	x	x	15	x	x	x
2	2	8	3	x	x	x	x	x	10	x	x	x
3	3	5	5	x	x	x	x	x	10	x	x	x
4	4	5	3	x	x	x	x	x	10	x	x	x
5	5	3	5	x	x	x	x	x	10	x	x	x
6	6	5	3	x	x	x	x	x	10	x	x	x
7	7	10	5	x	x	x	x	x	10	x	x	x
8	8	10	5	x	x	x	x	x	15	x	x	x
9	9	5	10	x	x	x	x	x	20	x	x	x
10	10	10	3	20	x	x	x	x	5	x	x	x
11	11	10	5	20	1	x	x	x	8	x	x	x
12	12	10	5	x	x	x	x	x	10	x	x	x
13	13	10	5	20	x	x	0.1	x	10	x	x	x
14	14	15	5	x	x	x	x	x	20	x	x	x
15	15	15	3	30	x	x	x	x	5	x	x	x
16	16	15	5	20	x	x	x	x	8	x	x	x
17	17	10	3	20	1	x	x	x	20	x	x	x
18	18	20	5	20	1	x	0.1	x	20	x	x	x
19	19	20	5	x	1	x	0.1	x	30	x	x	x
20	20	20	3	x	x	x	x	x	20	x	x	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803031

JOB .508(17)

AMDEL ANALYTICAL SERVICE

Semi-Quantitative Spectrographic Analysis Scheme A2

BATCH ...7.....

Form 23

Results in ppm unless otherwise stated. Detection limits in brackets.

	Sample No.	Cu (0.5)	Pb (1)	Zn (20)	Sn (1)	Cd (3)	Bi (1)	Ag (0.1)	Au (3)	Ga (1)	Ge (1)	As (50)	Sb (30)
1	UB21	30	15	x	1	x	x	0.1	x	20	x	x	x
2	22	30	10	x	1	x	x	0.1	x	30	x	x	x
3	23	3	8	x	x	x	x	x	x	10	x	x	x
4	24	3	8	x	1	x	x	x	x	10	x	x	x
5	25	3	8	x	3	x	x	0.1	x	20	x	x	x
6	26	3	8	x	x	x	x	x	x	20	x	x	x
7	27	5	8	x	x	x	x	x	x	15	x	x	x
8	28	5	8	x	x	x	x	x	x	10	x	x	x
9	29	3	20	x	x	x	x	x	x	10	x	x	x
10	30	3	10	x	x	x	x	0.1	x	15	x	x	x
11	31	5	5	x	x	x	x	x	x	10	x	x	x
12	32	5	10	x	x	x	x	x	x	15	x	x	x
13	33	5	10	x	x	x	x	x	x	20	x	x	x
14	34	5	15	x	x	x	x	x	x	20	x	x	x
15	35	10	8	20	1	x	x	x	x	30	x	x	x
16	36	8	5	20	1	x	x	x	x	20	x	x	x
17	37	10	5	20	1	x	x	x	x	30	x	x	x
18	38	10	3	x	1	x	x	x	x	10	x	x	x
19	39	10	8	x	1	x	x	0.1	x	15	x	x	x
20	40	5	10	x	x	x	x	x	x	10	x	x	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803038

037

JOB 5081171

AMDEL ANALYTICAL SERVICE

Semi-Quantitative Spectrographic Analysis Scheme A2

BATCH ... 8:.....

Form 23

Results in μm unless otherwise stated. Detection limits in brackets.

	Sample No.	Cu (0.5)	Pb (1)	Zn (20)	Sn (1)	Cd (3)	Bi (1)	Ag (0.1)	Au (3)	Ga (1)	Ge (1)	As (50)	Sb (30)
1	41	3	10	x	x	x	x	x	x	10	x	x	x
2	42	8	10	x	x	x	x	x	x	10	x	x	x
3	43	3	10	x	1	x	x	0.1	x	15	x	x	x
4	44	5	20	x	1	x	x	0.1	x	30	x	x	x
5	45	5	20	x	1	x	x	0.1	x	30	x	x	x
6	46	3	15	x	1	x	x	x	x	10	x	x	x
7	47	5	10	x	1	x	x	x	x	10	x	x	x
8	48	3	10	x	1	x	x	x	x	8	x	x	x
9	49	5	10	20	1	x	x	x	x	10	x	x	x
10	50	8	8	x	1	x	x	x	x	15	x	x	x
11	51	5	5	20	1	x	x	0.1	x	5	x	x	x
12	52	5	5	30	1	x	x	x	x	5	x	x	x
13	53	8	5	20	x	x	x	x	x	5	x	x	x
14	54	10	8	30	1	x	x	x	x	15	x	x	x
15	55	15	5	30	x	x	x	x	x	15	x	x	x
16	56	10	3	30	x	x	x	x	x	10	x	x	x
17	57	40	5	40	1	x	x	x	x	15	x	x	x
18	58	10	8	20	1	x	1	x	x	30	x	x	x
19	59	40	5	30	x	x	x	x	x	10	x	x	x
20	60	40	5	40	1	x	x	x	x	10	x	x	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

803039

038

JOB 508171
Form 23

AMDEL ANALYTICAL SERVICE

Semi-Quantitative Spectrographic Analysis Scheme A2

BATCH 9..... 039

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No.	Cu (0.5)	Pb (1)	Zn (20)	Sn (1)	Cd (3)	Bi (1)	Ag (0.1)	Au (3)	Ga (1)	Ge (1)	As (50)	Sb (30)
1 LB 61	30	3	40	1	x	x	x	x	5	x	x	x
2 62	30	3	60	1	x	x	x	x	5	x	x	x
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Results are semi-quantitative.

Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique. X = Not detected at limit quoted.

GEO. A1+A2 (62x29) = 1,798

803040

040

71-826

803041



amdel

The Australian Mineral Development Laboratories

Flemington Street, Frewville, South Australia 5063
Phone 79 1662, telex AA82520

Please address all correspondence to the Director
In reply quote: **AN3/612/0 - 864/72**

OCEANIC EXPLORATION.

E.L. 22/70

26 August 1971

Mr R.J. Coleman
Oceanic Exploration Company
PO Box 29
MARGATE Tas 7153

REPORT AN864/72

YOUR REFERENCE:	Letter dated 16/8/71
MATERIAL:	Stream sediment
IDENTIFICATION:	sl48 - s321
DATE RECEIVED:	17/8/71

Enquiries quoting AN864/72 to Officer in Charge please.

Spectrographic Analysis by: R.R. Robinson

Officer in Charge, Analytical Section: A.B. Timms

for F.R. Hartley
Director

fv

041

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803042

x = not detected at the limits quoted

REPORT AN 864/72

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sn. (1)
5148	x	x	x	x	8	x	x	x	x	1
149	x	x	1	x	5	x	x	x	x	x
150	x	x	x	10	3	x	x	x	x	x
151	x	x	x	10	3	x	x	x	x	1
152	x	x	1	10	3	x	x	x	x	1
153	x	x	x	10	3	x	x	x	x	10
154	x	x	1	15	3	x	x	x	x	1
155	x	x	1	10	5	x	x	x	x	x
156	x	x	1	15	10	x	x	x	x	x
157	x	x	1	10	3	x	x	x	x	x
158	x	x	3	10	3	x	x	x	x	1
159	x	x	2	15	3	x	x	x	x	1
160	x	x	2	10	3	x	x	x	x	1
161	x	x	2	30	3	x	x	x	x	1
162	x	x	1	20	3	x	x	x	x	1
163	x	x	2	20	3	x	x	x	x	1
164	x	x	2	10	3	x	x	x	x	1
165	x	x	3	15	5	x	x	x	x	1
166	x	x	3	15	5	x	x	x	x	1
167	x	x	1	10	3	x	x	x	x	1
168	x	x	1	10	3	x	x	x	x	1
169	x	x	3	15	5	x	x	x	x	1
170	x	x	3	20	3	x	x	x	x	1
171	x	x	2	10	1	x	x	x	x	1
172	x	x	3	15	3	x	x	x	x	1

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique.

042

2

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803043

x = not detected at the limits quoted

REPORT AN 864/72

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sn (1)
5173	x	x	2	20	1	x	x	x	x	1
174	x	x	3	15	3	x	x	x	x	1
175	x	x	1	60	20	x	x	x	x	1
176	x	x	1	20	3	x	x	x	x	1
177	x	x	x	20	5	x	x	x	x	1
178	x	x	x	10	5	x	x	x	x	1
179	x	x	1	15	3	x	x	x	x	1
180	x	x	1	15	3	x	x	x	x	1
181	x	x	2	15	3	x	x	x	x	1
182	x	x	2	15	5	x	x	x	x	1
183	x	x	3	80	5	x	x	x	x	1
184	x	x	1	15	5	x	x	x	x	1
185	x	x	2	20	3	x	x	x	x	1
186	x	x	3	15	5	x	x	x	x	1
187	x	x	3	20	10	x	x	x	x	1
188	x	x	2	15	100	x	x	x	x	1
189	x	x	1	15	300	x	x	x	x	1
190	x	x	2	10	5	x	x	x	x	1
191	x	x	1	20	5	x	x	x	x	1
192	x	x	3	15	3	x	x	x	x	1
193	x	x	2	15	3	x	x	x	x	1
194	x	x	1	20	10	x	x	x	x	1
195	x	x	2	10	3	x	x	x	x	1
196	x	x	x	80	5	x	x	x	x	1
197	x	x	3	30	10	x	x	x	x	2

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique.

043

3

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803044

x = not detected at the limits quoted

REPORT AN 864/72

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sn (1)
5198	x	x	2	15	10	x	x	x	x	1
199	x	x	3	15	10	x	x	x	x	1
200	x	x	3	30	10	x	x	x	x	2
201	x	x	1	15	20	x	x	x	x	1
202	x	x	2	10	10	x	x	x	x	1
203	x	x	3	15	10	x	x	x	x	1
204	x	x	3	10	15	x	x	x	x	1
205	x	x	2	10	20	x	x	x	x	1
206	x	x	1	10	100	x	x	x	x	1
207	x	x	2	10	8	x	x	x	x	1
208	x	x	2	15	5	x	x	x	x	1
209	x	x	2	10	3	x	x	x	x	1
210	x	x	2	15	10	x	x	x	x	1
211	x	x	2	10	10	x	x	x	x	2
212	x	x	2	10	8	x	x	x	x	1
213	x	x	3	20	15	x	x	x	x	2
214	x	x	3	20	20	x	x	x	x	2
215	x	x	x	x	5	x	x	x	x	1
216	x	x	x	10	15	x	x	x	x	1
217	x	x	1	40	15	x	x	x	x	1
218	x	x	1	30	10	x	x	x	x	1
219	x	x	1	20	20	x	x	x	x	5
220	x	x	2	40	20	x	x	x	x	3
221	x	x	3	15	15	x	x	x	x	10
222	x	x	2	10	15	x	x	x	x	2

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique.

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

x = not detected at the limits quoted

REPORT AN 864/72

803045

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sr (1)
S 223	x	x	10	30	10	x	x	x	x	1
224	x	x	10	10	10	x	x	x	x	1
225	x	x	10	15	10	x	x	x	x	1
226	x	x	10	15	20	x	x	x	x	1
227	x	x	10	15	15	x	x	x	x	1
228	x	x	10	15	10	x	x	x	x	1
229	x	x	3	10	15	x	x	x	x	1
230	x	x	5	15	15	x	x	x	x	3
231	x	x	10	20	5	x	x	x	x	1
232	x	x	x	x	3	x	x	x	x	1
233	x	x	1	10	20	x	x	x	x	1
234	x	x	1	x	5	x	x	x	x	2
235	x	x	x	15	10	x	x	x	x	2
236	x	x	1	10	15	x	x	x	x	2
237	x	x	1	30	10	x	x	x	x	1
238	x	x	10	15	10	x	x	x	x	2
239	x	x	10	20	10	x	x	x	x	1
240	x	x	3	30	10	x		x	x	5
241	x	x	10	20	15	x		x	x	2
242	x	x	3	20	10	x		x	x	2
243	x	x	3	15	10	x		x	x	1
244	x	x	3	30	15	x		x	x	2
245	x	x	3	20	10	x		x	x	40
246	x	x	3	30	10	x		x	x	1
247	x	x	3	40	30	x		x	x	2

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique.

045

5

Semi-Quantitative Spectrographic Analysis

803046

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

x = not detected at the limits quoted

REPORT AN 864/72

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sn (1)
S 248	x	x	2	10	10	x	x	x	x	1
249	x	x	10	20	15	x	x	x	x	1
250	x	x	2	10	10	x	x	x	x	1
251	x	x	3	10	10	x	x	x	x	1
252	x	x	10	15	3	x	x	x	x	1
253	x	x	3	x	3	x	x	x	x	1
254	x	x	2	60	5	x	x	x	x	1
255	x	x	3	30	3	x	x	x	x	1
256	x	x	2	10	5	x	x	x	x	1
257	x	x	2	20	8	x	x	x	x	1
258	x	x	2	15	3	x	x	x	x	1
259	x	x	2	15	5	x	x	x	x	1
260	x	x	2	20	10	x	x	x	x	1
261	x	x	1	20	3	x	x	x	x	1
262	x	x	2	20	5	x	x	x	x	1
263	x	x	3	20	5	x	x	x	x	1
264	x	x	3	20	5	x	x	x	x	1
265	x	x	1	15	3	x	x	x	x	1
266	x	x	2	20	3	x	x	x	x	1
267	x	x	5	30	5	x	x	x	x	1
268	x	x	2	10	5	x	x	x	x	1
269	x	x	3	15	5	x	x	x	x	1
270	x	x	3	20	8	x	x	x	x	1
271	x	x	3	40	10	x	x	x	x	1
272	x	x	3	20	15	x	x	x	x	1

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique.

046

6

Semi-Quantitative Spectrographic Analysis

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

803047

x = not detected at the limits quoted

REPORT AN 86472

FORM 91

Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sr (1)
S 273	x	x	3	15	15	x	x	x	x	x
274	x	x	2	20	15	x	x	x	x	x
275	x	x	2	20	15	x	x	x	x	x
276	x	x	2	20	10	x	x	x	x	x
277	x	x	2	20	10	x	x	x	x	x
278	x	x	1	20	5	x	x	x	x	x
279	x	x	1	10	10	x	x	x	x	x
280	x	x	3	15	15	x	x	x	x	x
281	x	x	2	10	10	x	x	x	x	x
282	x	x	3	15	15	x	x	x	x	x
283	x	x	3	20	15	x	x	x	x	x
284	x	x	2	30	15	x	x	x	x	x
285	x	x	3	30	15	x	x	x	x	x
286	x	x	2	15	8	x	x	x	x	1
287	x	x	2	15	5	x	x	x	x	1
288	x	x	2	10	5	x	x	x	x	3
289	x	x	2	10	5	x	x	x	x	3
290	x	x	3	10	8	x	x	x	x	5
291	x	x	3	10	10	x	x	x	x	3
292	x	x	2	10	8	x	x	x	x	3
293	x	x	3	10	15	x	x	x	x	2
294	x	x	3	10	10	x	x	x	x	x
295	x	x	x	x	10	x	x	x	x	1
296	x	x	x	x	10	x	x	x	x	x
297	x	x	x	x	10	x	x	x	x	x

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be redetermined by an appropriate accurate analytical technique.

047

Semi-Quantitative Spectrographic Analysis
 THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES
 x = not detected at the limits quoted
 REPORT AN 864/72

803048

ORM 91 Results in ppm unless otherwise stated. Detection limits in brackets.

Sample No	W (50)	Mo (3)	Be (1)	V (10)	Cu (0.5)	Sb (30)	Zn (20)	As (50)	Au (3)	Sn (1)
298	x	x	x	x	10	x	x	x	x	x
299	x	x	x	x	3	x	x	x	x	x
300	x	x	x	x	8	x	x	x	x	x
301	x	x	x	x	5	x	x	x	x	x
302	x	x	x	x	8	x	x	x	x	x
303	x	x	x	10	5	x	x	x	x	x
304	x	x	x	x	10	x	x	x	x	x
305	x	x	x	x	3	x	x	x	x	x
306	x	x	x	x	5	x	x	x	x	x
307	x	x	x	x	5	x	x	x	x	x
308	x	x	x	x	10	x	x	x	x	x
309	x	x	x	x	8	x	x	x	x	x
310	x	x	x	x	20	x	x	x	x	x
311	x	x	x	x	3	x	x	x	x	x
312	x	x	x	x	3	x	x	x	x	x
313	x	x	1	x	5	x	x	x	x	40
314	x	x	1	10	3	x	x	x	x	120
315	x	x	2	x	3	x	x	x	x	80
316	x	x	1	x	3	x	x	x	x	5
317	x	x	1	x	8	x	x	x	x	10
318	x	x	1	x	3	x	x	x	x	x
319	x	x	15	x	10	x	x	x	x	1
320	x	x	2	x	3	x	x	x	x	x
321	x	x	2	x	3	x	x	x	x	x
GEO. A1+A2 (174x10)=1740										

Results are semi-quantitative. Elements apparently present in concentrations of economic interest should be re-determined by an appropriate accurate analytical technique

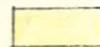
048

REFERENCE

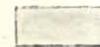
803049 71-826

Quaternary

Alluvium - clay, sands and gravel



Rounded and angular quartz gravels, sands, ferruginous gravels



Mathinna Beds talus



Tertiary

Basalt



Sandstones and conglomerates



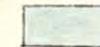
Jurassic

Dolerite



Permian

Pebbly mudstones, sandstones, conglomerates

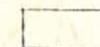


Devonian

Granodiorite



Granite



Stanniferous - type granites



Porphyritic biotite-adamellite, granite porphyry



Silurian

Mathinna Beds - Arenite-lutite formation



- Lutite formation



E.L. 22/70
Oceanic Exploration
DATA BASE NOS
~~10348-10~~
10348-10521

SAMPLES 12 - 22
IN OLD STRONACH
ALLUVIAL WORKINGS

SCOTTS DALE

E.L. 17/70

Δ Mt. Stronach

Δ Cuckoo Hill

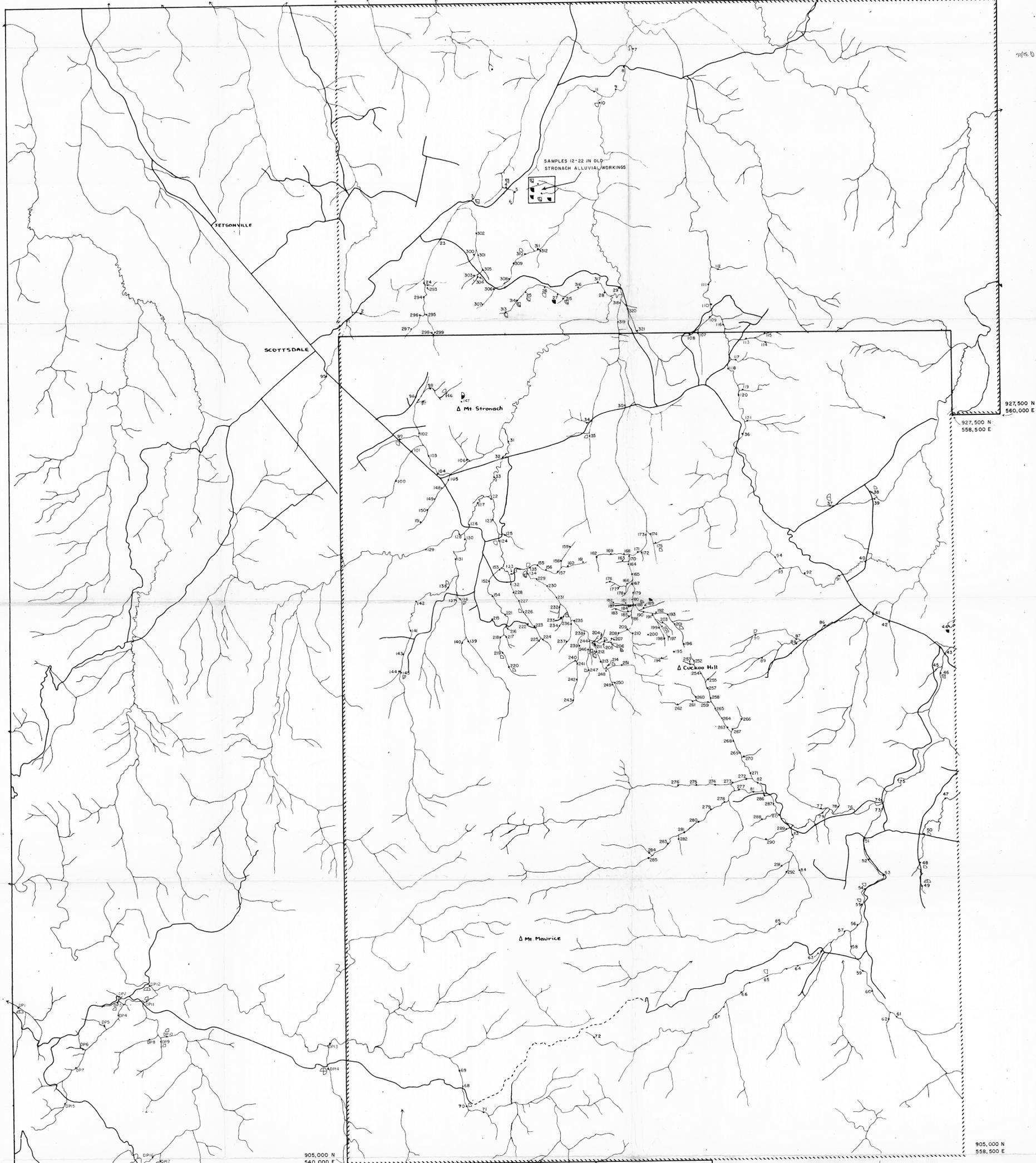
Δ Mt. Maurice

256
MISSING

5 cm

939,500 N
540,000 E

939,500 N
560,000 E



927,500 N
558,500 E

905,000 N
540,000 E

905,000 N
558,500 E

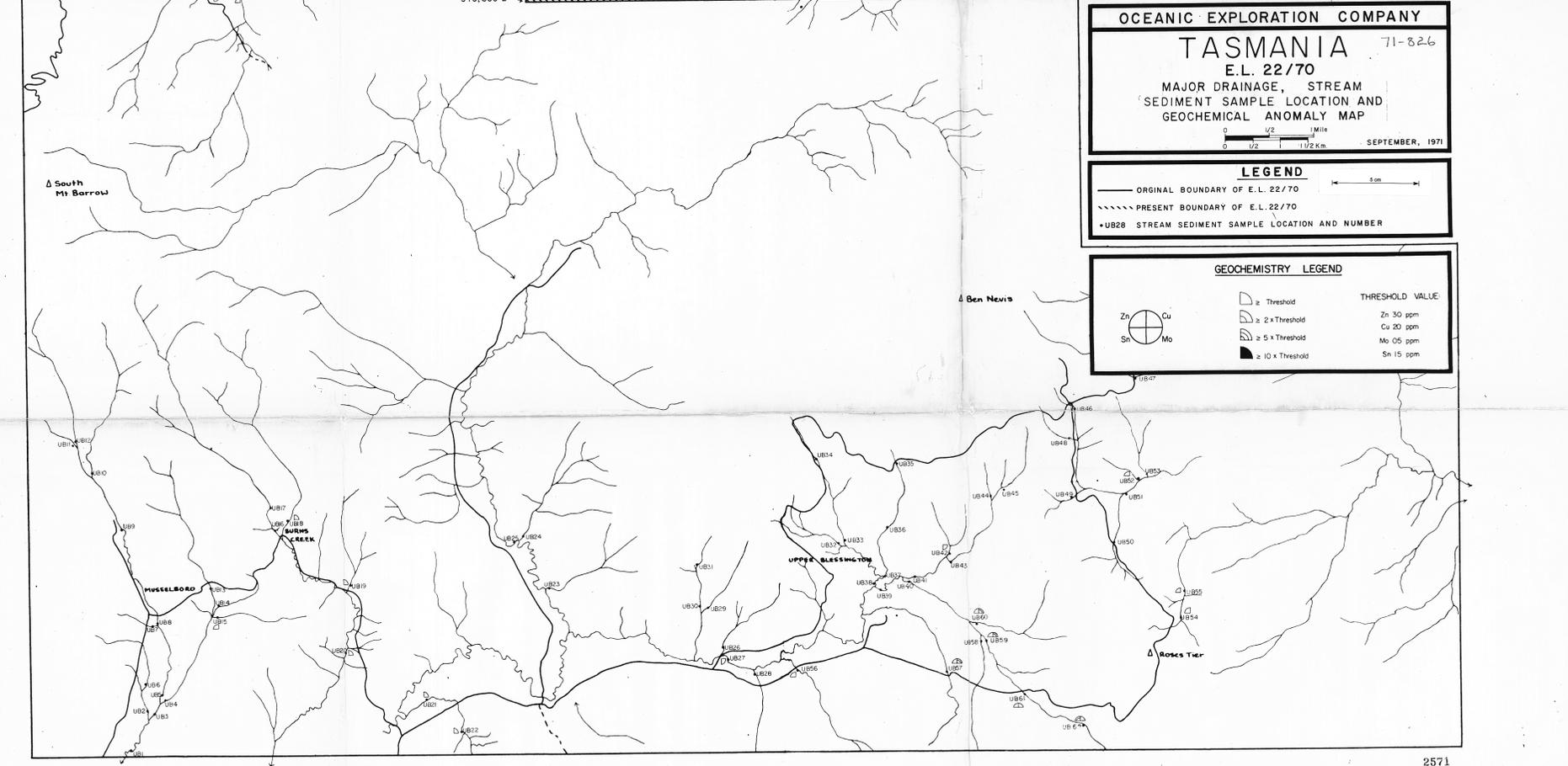
OCEANIC EXPLORATION COMPANY
TASMANIA 71-826
 E.L. 22/70
 MAJOR DRAINAGE, STREAM
 SEDIMENT SAMPLE LOCATION AND
 GEOCHEMISTRY ANOMALY MAP
 0 1/2 1 1 1/2 2 Miles
 0 1/2 1 1 1/2 2 Kilometers
 SEPTEMBER, 1971

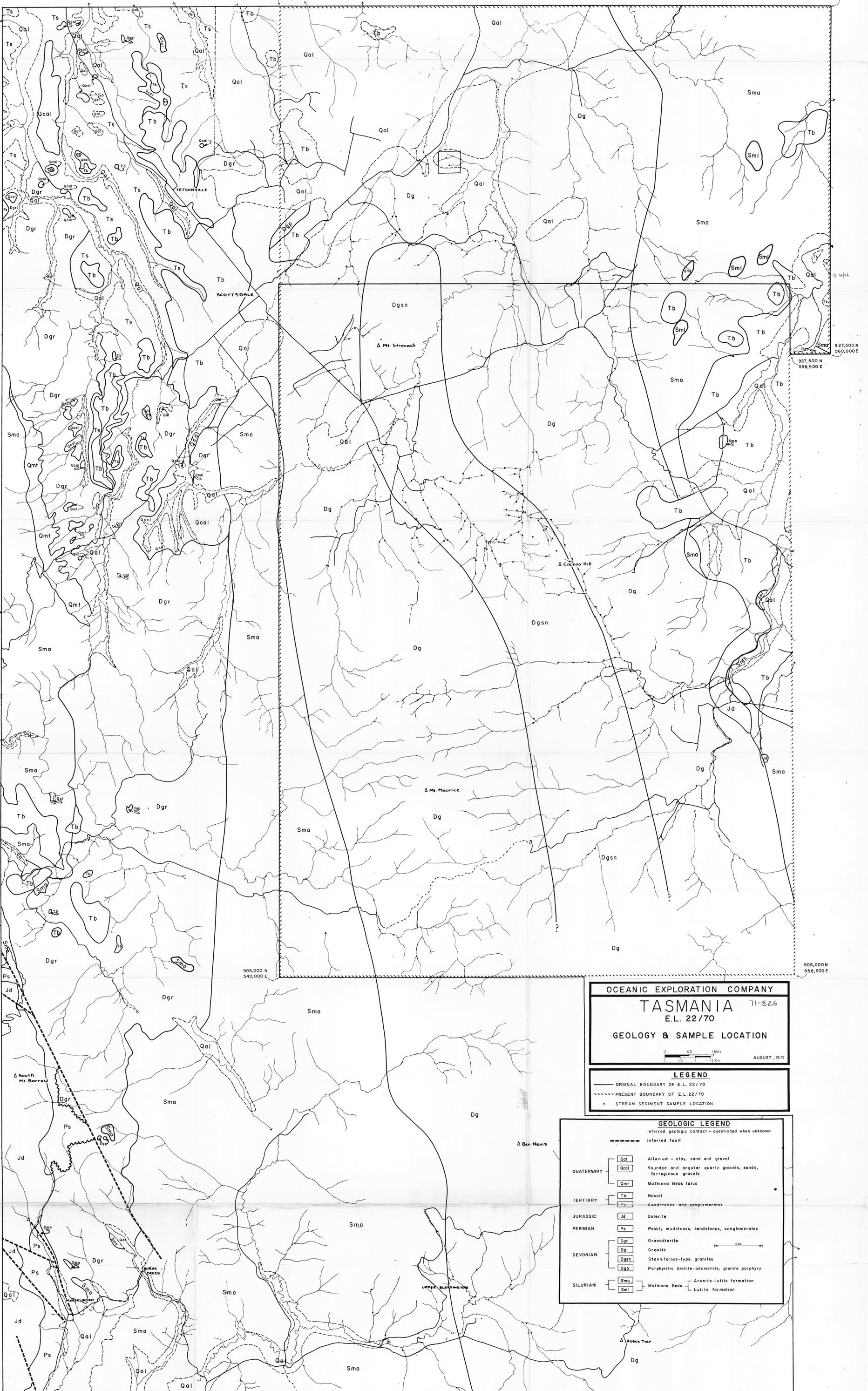
LEGEND

— ORIGINAL BOUNDARY OF E.L. 22/70
 - - - PRESENT BOUNDARY OF E.L. 22/70
 *UB228 STREAM SEDIMENT SAMPLE LOCATION AND NUMBER

GEOCHEMISTRY LEGEND

Zn	Cu	□	≥ Threshold	THRESHOLD VALUE
Sn	Mo	▨	≥ 2 × Threshold	Zn 30 ppm
		▩	≥ 5 × Threshold	Cu 20 ppm
		■	≥ 10 × Threshold	Mo 05 ppm
				Sn 15 ppm





OCEANIC EXPLORATION COMPANY
TASMANIA 71-82.6
 E.L. 22/70
GEOLOGY & SAMPLE LOCATION
 0 1/2 1 Mile
 0 1/2 1 1/2 Km
 AUGUST, 1971

LEGEND
 — ORIGINAL BOUNDARY OF E.L. 22/70
 - - - - - PRESENT BOUNDARY OF E.L. 22/70
 • STREAM SEDIMENT SAMPLE LOCATION

GEOLOGIC LEGEND

Inferred geologic contact - questioned when unknown
 - - - - - Inferred fault

QUATERNARY	Qal	Alluvium - clay, sand and gravel
	Qcal	Rounded and angular quartz gravels, sands, ferruginous gravels
	Qml	Mathinna Beds talus
TERTIARY	Tb	Basalt
	Ts	Sandstone and conglomerates
JURASSIC	Jd	Dolerite
PERMIAN	Ps	Pebbly mudstones, sandstones, conglomerates
	Dgr	Granodiorite
DEVONIAN	Dg	Granite
	Dgsn	Stanniferous-type granites
	Dgp	Porphyritic biotite-adamellite, granite porphyry
SILURIAN	Sma	Mathinna Beds - Arenite-lutite formation
	Smi	Lutite formation

5cm

71-826
E.L. 22/70
DATA BASE
NOS
10201-247
10273-
10572-10538

2573



E.L. 17/70

SCALE 2" : 1 mile

DA 1

2573
S03053

E.L. 17/70



SCALE 2" = 1 mile

