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**ALLSTATE PROSPECTING PTY LTD**

**EL20/94 EXPLORATION REVIEW**

**OCTOBER 1995**

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Prepared by

**MICHAEL V. McKEOWN**

**BSc (Melbourne), Grad Dip Mining (Ballarat),  
Ass Dip Ag Bus Man (Launceston), Fellow AusIMM**

for

**McKEOWN MINING PTY LTD  
RIDGLEY, TASMANIA  
(phone 004 357560)**

on behalf of

**ALLSTATE PROSPECTING PTY LTD**

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EL 20/94 BEACONSFIELD EXPLORATION  
REVIEW OCTOBER 1995 - ALLSTATE  
PROSPECTING - M V MCKEOWN

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## SUMMARY

Allstate Exploration Pty Ltd holds an area of 41 square kilometres in northern Tasmania under Exploration Licence 20/94. EL 20/94 lies to the south of the Tasmania Mine at Beaconsfield and extends southwards to cover Salisbury Hill.

The mines on Salisbury Hill occur within the Cabbage Tree Formation at the south end of Salisbury Hill; quartz veining ranges from thin, discontinuous veins and veinlets to thick veins, at least one metre thick, with dips from horizontal to sub-vertical, and gold bearing pug and pyritic conglomerate have been identified.

Mining activity at Salisbury Hill has been sporadic, intensive mining ceasing in 1903, and there are no official records of gold production from the goldfield.

Modern exploration of the Salisbury Hill area has been undertaken by Amax, RGC and BGM with two targets in mind: repetitions of the reefs mined at Beaconsfield and low grade-large tonnage stockworks.

Drilling of the area near the old workings has been limited and inconclusive; two geochemical anomalies have been identified and remain unexplained.

Now that the Tasmania Mine has been proved to be profitable as a stand alone operation any ore found at Salisbury Hill can be regarded as incremental ore and the grade-tonnage targets being sought can be smaller than previously considered.

Any reef bearing structure will not necessarily be mineralised at its surface outcrop; completely concealed gold deposits may occur in the area.

Apart from reef and stockwork style mineralisation, the possibility exists for other styles to be discovered, for example, Carlin or Nagambie style deposits; at this stage of exploration, the aim should be to look for gold, not particular types of gold deposit.

A synthesis is needed of all the data available to date; an informed synthesis of this data will reveal drilling targets.

After the data have been adequately compiled, the specific tasks recommended by previous workers should be re-evaluated and executed where warranted; these include the collection of power-auger samples, detailed assaying of diamond drill core from existing diamond drill holes, a VLF electromagnetic survey, and a percussion drill hole programme.

During the next year, three specific tasks which will assist in the definition of drilling targets are recommended: BLEG analysis of closely spaced stream sediment samples, sampling of rock outcrop over the whole area of the Licence, and detailed (1:500 scale) mapping and sampling of exposures in all accessible old workings.

## EL20/94 EXPLORATION REVIEW

## 1 INTRODUCTION

Allstate Exploration Pty Ltd holds an area of 41 square kilometres in northern Tasmania under Exploration Licence 20/94. EL 20/94 lies to the south of the Tasmania Mine at Beaconsfield and extends southwards to cover Salisbury Hill.

The Licence covers an old gold mining area known as the Salisbury Hill Goldfield where several small mines were in operation around the turn of the century. The Salisbury Hill area has been the subject of sporadic exploration since 1980. This report summarises and reviews the exploration undertaken to date and outlines the prospectivity of the area.

## 2 TENURE

Cabbage Tree Hill and Salisbury Hill are the high points of a ridge of sandstone and quartzite transected by the Middle Arm Creek: Cabbage Tree Hill lies to the north, and Salisbury Hill to the south, of the creek. The gap created where the Middle Arm Creek cuts through the ridge is known as Eaglehawk Gully. In some old reports Salisbury Hill is referred to as Blue Tier. The use of the term Blue Tier is now restricted to the tin mining area near Lottah in north-east Tasmania.

Exploration Licence 20/94, which covers an area of 41 square kilometres, lies immediately to the south of the Beaconsfield Operations Mining Lease, and covers the south end of Cabbage Tree Hill and all of Salisbury Hill.

There are three areas within EL 20/94 subject to Mining Leases by other parties. In the north of the Exploration Licence, Temco Pty Ltd and Boral Resources (Tas) Limited have leases, where aggregate is quarried, which cover the southern end of Cabbage Tree Hill and the northern end of Salisbury Hill. Beams Brothers Holdings Pty Ltd have leases over an area of limestone at the south end of the Exploration Licence. A small Mining Lease, 106M/68 in the name of J.S. Denison, lies to the south-west of Salisbury Hill. Refer to Figure 1 which shows the locations of the Exploration Licence and these Mining Leases.

Note that the Temco Mining Lease extends southwards only to 5 435 000N; the old title shown in Figure 1 as 145M/69 has been relinquished.

EL 20/94 covers areas of private land and State Forest, including one Recommended Area for Protection of Species. What appears to be the most prospective area for exploration, the south end of Salisbury Hill, lies within State Forest.

EL 20/94 has been granted for a ten year period ending on the 28th of October 2004 but the area of the Licence is required to be halved in 1999.

### 3 GEOLOGY

#### 3.1 GEOLOGY

Refer to Figure 2 which is a plan showing a summary of the geology and the results of geochemical and geophysical surveys.

The known hard rock gold deposits in the Beaconsfield area occur in the belt of Lower Palaeozoic sedimentary rocks which stretches from Beaconsfield township southwards to Flowery Gully. Sequences of steeply east dipping Ordovician and Cambrian rocks are separated by thrust faults causing repetition of the sequences in plan. The thrust faults strike parallel to bedding and dip to the east more steeply than bedding.

The Cambrian sequence consists of siltstone, quartzite, conglomerate and dolomite; the Ordovician of sandstone, conglomerate and limestone. In the Beaconsfield area, the Ordovician has been subdivided into the Cabbage Tree Conglomerate and the overlying Gordon Limestone. Details of the stratigraphy are improving as drilling at the Tasmania Mine continues and the stratigraphic succession in the Beaconsfield area will be the subject of a separate report in the near future.

Cabbage Tree Hill and Salisbury Hill are part of a long ridge of the sandstone and conglomerate of the Ordovician Cabbage Tree Formation.

The Cambrian sedimentary rocks at the Salisbury Hill workings have been intruded by Cambrian ultramafic dykes, described as altered pyroxenites (Poltock, 1980).

To the west, the Lower Palaeozoic rocks are separated from the Precambrian rocks of the Badger Head Group by a Cambrian ultramafic mass. To the east, the Palaeozoic rocks are unconformably overlain by gently dipping Permian sedimentary rocks.

To the north, the Permian sedimentary rocks and Tertiary and Quaternary sands and gravels cover the Lower Palaeozoic sedimentary rocks.

A Tertiary deep lead occurs just to the east of Cabbage Tree Hill.

In addition to the major set of thrust faults, a set of faults striking more or less east-west is known. It is this fault set which is the site of emplacement of the Tasmania and North Tasmania Reefs.

The principal gold producing reefs occur on the flanks of Cabbage Tree Hill: the Tasmania and North Tasmania Reefs, both of which strike north-east, dip south-east at 40 to 50 degrees and plunge north-east at 50 to 70 degrees. The Tasmania Reef is best developed within the Cabbage Tree Formation, degenerating into a series of stringers in the Gordon Limestone. Within the mine, the reef is typically 2 to 3 metres thick and extends over a strike length of about 400 metres; the reef outcrops and its bottom has not been identified and drilling has confirmed its presence to a vertical depth of over 1000 metres below the

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surface. The Tasmania Reef is a quartz-ankerite vein with minor sulphides and native gold: see section 3.3 for a description of the mineralogy of the Reef.

Collins (1989) considered that the Beaconsfield reefs were not genetically related to Devonian granite because the reefs are spatially remote, in plan, from outcropping Devonian granite. Nevertheless, the lead isotopic composition of the Tasmania Reef indicates a Devonian age for the mineralisation confirming a genetic association with Devonian granite intrusions (Carr, 1988). Bishop (1988) concluded that gravitational data did not indicate the existence of a granite beneath the Beaconsfield area unless it was very deeply buried and Leaman and Richardson (1992) suggested that a granodioritic mass could be inferred beneath Beaconsfield at a depth of four to six kilometres.

Bishop (1988) reported that Hicks considered that the ultramafic complex, which outcrops to the west, was the source of the gold in the Beaconsfield ore.

The mines on Salisbury Hill also occur within the Cabbage Tree Formation, however, the styles of mineralisation described in these mines have been thought to differ to that of the Tasmania Reef: see section 3.3.

### 3.2 MINES

The locations of the hard rock metal mines which have been recorded in the area covered by EL 20/94 are shown in Figure 2.

The main group of workings is located at the south end of Salisbury Hill:

- Salisbury Shaft,
- Victoria Tunnel,
- Duchess of York Tunnel, also known as the Santa Claus or the Gladstone,
- the Dyke Tunnel,
- the Powerline Adit.

Attempts made in the 1980s to reopen the Victoria and Duchess of York tunnels were unsuccessful. The Powerline Adit is still open.

A prospect described by Nye (1931) on the north end of Salisbury Hill on the south-west side of Middle Arm Creek was known as Best and Tuskins.

An un-named prospect was reported (Nye and Blake, 1934) at the northern end of Salisbury Hill; a shaft at this prospect was known as the Water Shaft.

A copper silver prospect, known as the Rising Sun Gold Mine, was reported (Thureau, 1883), on Cabbage Tree Hill, just north of Middle Arm Creek.

### 3.3 MINERALISATION

At Beaconsfield, the *Tasmania Reef* is a sulphide rich quartz/ankerite vein containing gold. The sulphides are pyrite, arsenopyrite with lesser chalcopyrite, sphalerite and galena. The paragenetic sequence has been described by Russell and van Moort (1992).

The mineralogy of the *Salisbury Hill* deposits has also been summarised by Russell and van Moort:

"While no gold mineralisation was observed (by us) in the *Salisbury* samples, historical descriptions (Twelvetrees, 1903) indicate there were two types of occurrences of gold. Gold was associated with quartz veins containing pyrite, arsenopyrite and stibnite, but, unfortunately, the micro-relationships were not described. Adjacent to the serpentinite, iron-stained silicious formations contained patchy amounts of gold, which were often coated with a black manganese layer. There were unconfirmed reports that nuggets of gold were found in large vugs in this formation."

At *Salisbury Hill* the veins have been reported by recent workers to consist of quartz/arsenopyrite/pyrite in the *Cabbage Tree Formation*, and to be thin and discontinuous, striking parallel to, and dipping against, bedding. In addition, there is reported to be gold associated with iron stained siliceous rocks which may be gossans developed on serpentinite dolomite rocks derived from ultramafic intrusions (Poltock, 1980).

Nearly all the recent descriptions of the mineralisation have been based on reports of previous workers with limited observations from the few accessible workings. Thureau (1883) visited all workings, describing the geology and mineralisation. Montgomery (1891) did not visit *Salisbury Hill*. Twelvetrees (1903) was not able to enter all the workings and his report is based on his own observations and information given to him by company personnel.

By the 1980s the view had arisen that the veins in the *Salisbury Hill* area were thin and discontinuous, had a strike parallel to bedding, and dipped against the dip of the beds (Poltock, 1980) or steeply to the east or west (Pease, 1984). This recent view of the attitude of the veins is contradicted by the descriptions given by Thureau (1883) and Twelvetrees (1903).

In the *Blue Tier Gold Mining Company* tunnel, now known as the *Duchess of York* tunnel, Thureau (1883) reported a flat quartz reef about one metre thick. In the *Victoria* tunnel he described the gold occurring in sulphide "bunches" occurring at the intersection of pug seams in sandstone with vertical joints and joints orthogonal to bedding.

Twelvetrees (1903) reported veins and veinlets dipping against the strike of the host rocks in the *duchess of york* tunnel, including a vein 3 feet 6 inches (about a metre) wide which "runs with the country but dips south-west against it". In the same tunnel, he also reported a pug seam which was reported to carry payable gold referred to as the nugget formation, and

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50 feet (about 15 metres) of slate and conglomerate impregnated with pyrite which he considered to have been "mineralised by an adjacent lode".

In summary, quartz veining ranges from thin, discontinuous veins and veinlets to thick veins, at least one metre thick, with dips from horizontal to sub-vertical. Also, gold bearing pug and pyritic conglomerate have been identified.

### 3.4 GOLD PRODUCTION

Gold production from the Beaconsfield Goldfield is reported as 27.8 tonnes: see Table 1 (Bottrill, 1992). This is by far the largest gold producing goldfield in the Tasmania. There are no official records of gold production from the Salisbury Hill Goldfield.

### 4 EARLY EXPLORATION HISTORY

The Dally brothers discovered gold on Cabbage Tree Hill at Beaconsfield in 1877 and mining continued at the Tasmania Mine until 1914.

Shortly after the Cabbage Tree Hill discovery, Yates discovered gold at Salisbury Hill but mining activity here was sporadic. In 1882, there were 52 leases on the Salisbury Hill field and a town with a Post office had sprung up. However, in 1884 the town was all but deserted. Further mining and exploration took place from 1893 to 1896 when the field was again abandoned when "no sense could be made of the run of the metal" (Smith, 1978). In 1903, further exploration based on tunnelling and shaft sinking took place.

The southern end of the hill was mined by sluicing and underground hardrock mining from adits and shafts; mining was concentrated around the Duchess of York, Victoria and Powerline adits. Other small shows were reported from both banks of Eaglehawk Gully.

Thureau visited the Beaconsfield and Salisbury Hill Goldfields in 1883 and recorded the gold occurrences known at the time. He described the principal lodes in the Cabbage Tree Hill area.

Unfortunately, Montgomery, who reported on the Beaconsfield area in 1891, did not visit the Salisbury Goldfield.

Twelvrees reported on the Beaconsfield and Salisbury Hill mines in 1903. He visited and described the geology of the Duchess of York tunnel, the Victoria tunnel being inaccessible at the time.

Noldart (1964) made mention of the Salisbury area, very briefly summarising the earlier reports mentioned above.

Gee and Legge (1979) also only made brief mention of the Salisbury Hill area, repeating, verbatim in part, the comments of Noldart (1964).

TABLE 1

**TASMANIAN GOLD PRODUCTION  
FROM GOLDFIELDS**

	tonnes
Beaconsfield	27.8
Lisle	10
Mathinna	8.8
Lefroy	5.2
Corinna	1
Alberton	.8
Lyell	.7
Mangana	.5
Wynyard	.3
Back Creek	.3
Gladstone	.2
Cethana	.2
Dans Rivulet	.2
Warrentina	.1
Cygnets	.1
Lyndhurst	.02
Scamander	.01
Jane River	.01

Estimated gold production taken from Tasmania Mines Department records and various reports; by-product gold production not included (after Bottrill et al, 1992)

Diamond drill holes S1 and S2 were drilled beneath the Salisbury Mine by the Tasmania Department of Mines between 1970 and 1973. Neither hole was sampled by the Department.

The Broken Hill Proprietary Company Limited (BHP) explored the area in a search for limestone, iron ore, chromium and nickel in the 1960s.

## 5 RECENT EXPLORATION

### 5.1 INTRODUCTION

Modern exploration of the Salisbury Hill area has been undertaken in three programmes:

- Amax Iron Ore Corporation ("Amax") in joint venture with Allstate Exploration Limited ("Allstate") and Tricentrol Australia Pty Limited ("Tricentrol") to explore Authority to Prospect 6/80;
- Renison Goldfields Consolidated Limited ("RGC") in joint venture with Allstate, Amax and Tricentrol to explore the Tasmania Reef and the surrounding exploration tenement, Exploration Licence 17/73;
- Beaconsfield Gold Mines Limited ("BGM") under Exploration Licence 7/88.

Allstate Prospecting Pty Ltd now holds Exploration Licence 20/94 over the area.

### 5.2 AMAX 1980 to 1982

In 1980, exploration of the Salisbury Hill area was undertaken by Poltock on behalf of Amax (Poltock, 1980). This was part of a programme which included geological mapping, a magnetometer survey, channel sampling of old workings, and sampling and analyses of parts of the drill holes S1 and S2 which had been drilled beneath the Victoria tunnel: see Table 2 (Ireland, 1980; Pease, 1984).

Hamlyn (1982) reported that the soil sampling programme was abandoned due to the thick unconsolidated regolith on Salisbury Hill and the possibility that spoil from old mine workings could contaminate samples. Effort was concentrated on sampling the old workings to which access could be gained. As a result, a significant gold occurrence was identified in the Powerline Adit. 360 samples were taken in the adit and analysed for gold, silver, arsenic, copper, lead, zinc and manganese. Sketch plans of plots of all analyses, except gold, have been located by the author. Gold analyses ranged up to 7.83 g/t and averaged 0.50 g/t over the 360 samples.

Hamlyn (1982) also reported that in S1 and S2 "sampling over several intervals showed gold values to be generally 1 ppm."

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TABLE 2

**SALISBURY HILL AREA  
DIAMOND DRILL HOLES COMPLETED**

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<b>HOLE NO</b>	<b>LOCATION</b>	<b>DRILLED BY</b>
S1	Victoria tunnel	Tas Mines Department
S2	Victoria tunnel	Tas Mines Department
S3	<i>Geochemical anomaly</i>	RGC
S4	<i>Geochemical anomaly</i>	RGC
S5	Johnson Creek Fault geochemical anomaly	RGC
S6	Salisbury Hill geochemical anomaly	RGC

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Two significant results arose from the work by Amax. First, the important gold occurrence was identified in the Powerline Adit. Second, a significant arsenic anomaly was identified downhill from the old workings around the Duchess of York, Salisbury, Victoria and Powerline mines (Newnham and Pease, 1983).

### 5.3 RGC 1982 to 1985

Exploration by RGC was directed at finding a large tonnage - low grade vein system or further Tasmania Reef style mineralisation (Pease, 1984). Salisbury Hill was considered prospective because of the geological similarity to the area where the Tasmania Reef occurs, notably:

- "- similar geology
- suggestion of major cross-cutting faults
- many near surface gold workings in the Cabbage Tree Conglomerate and Transition Beds
- strong As anomalies in the soils associated with these workings." (Newnham and Pease, 1983)

In June 1983, a programme of soil sampling and geological mapping was proposed to identify drilling targets (Newnham and Pease, 1983). The geochemical programme was completed and two arsenic anomalies were identified: one suggesting a stockwork vein system, the other a reef. Both targets were diamond drilled, the holes being S3 to S6.

The stockwork target was centred on the old workings near where diamond drill holes S1 and S2 had been drilled by the Department of Mines. Three diamond holes were drilled into this target: S3, S4 and S6. Assays of core from the holes indicated the presence of low density quartz veining and an associated strong arsenic/antimony/base metal anomaly with low gold values; the best gold intersection in the new holes was 2m at 0.6 g/t. Splitting and assaying of S1 and S2 revealed the presence of 12cm of quartz at 4.7 g/t. Pease (1984) suggested that the presence of the antimony anomaly suggested the possibility of a gold bearing zone "laterally or vertically distanced from the main workings...". He recommended that detailed assaying of diamond drill core from the drill holes be carried out in attempt to determine the positions of the drill holes relative to the inferred occurrence of gold mineralisation.

S5 was drilled into the second target, the Johnson Creek Fault anomaly. No gold values above detection limit, and no anomalous arsenic values, were obtained from samples from this hole. Pease (1984) concluded that this indicated

"one of three things:

- (1) The anomaly is not related to the fault
- (2) The drilling failed to intersect the fault
- (3) The fault was intersected in an unfavourable horizon (e.g. Cambrian Material) and not recognised as a major structure."

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He recommended a programme of closely spaced power-auger samples on lines running north south to delineate east west fault structures.

Neither the sampling of the drill core nor the drilling of the auger holes was carried out.; RGC withdrew from the Joint Venture in 1985 because drilling at the Tasmania Mine had not realised its objective of delineating an ore reserve (Hicks, 1989) and because of the realisation that a Mining Lease, held by another party, existed over the Salisbury Hill workings.

#### 5.4 BGM 1987 to 1989

BGM took up Exploration Licence 7/88 which covered the area now taken in by Exploration Licence 20/94 in 1988. A programme of geological mapping, airborne magnetic and radiometric and ground gravity surveys, and a BLEG survey were undertaken over the Salisbury Hill area. The objective of the exploration was to delineate additional gold reserves in the Beaconsfield area to augment the reserves at the Tasmania Mine (Hicks, 1989).

Pessimistically, Hicks (1989) concluded that "the overall results of the exploration programme were disappointing" and that the "outcrop extent of the lower Palaeozoic rock sequence which hosts the Tasmania mine has been adequately explored and does not warrant further exploration." He recommended that exploration be directed towards the host rocks buried beneath Permian and Tertiary cover to the north of Beaconsfield. As far as the Salisbury Hill is concerned, this was an unfortunate conclusion. Apart from the general conclusions which can be made from the geophysical surveys, the only new data relevant to the area were the BLEG analyses. The only BLEG anomaly was identified on Salisbury Hill and an abandoned adit was located upstream from the anomalous sample. A gossanous quartz sample taken near this adit returned gold values from 0.5 to 1.5 g/t. Soil sampling in the area returned "background gold values" (Hicks, 1989).

However, two important results of this programme did result from the geophysical investigations. The first was the identification of several geophysical linears crosscutting the Cabbage Tree Formation (Bishop, 1988). He considered, however, that a "repeated Tasmania Mine type of deposit within the outcropping CTFm would also be expected to show some near-surface indication of gold". this assumption is discussed below.

The second was the gravity modelling profile along a line which passes through the Tasmania Mine. The interpretation of this gravity profile has two important features: the large ultramafic body to the west of the Mine is shown as dipping vertically; no granite is shown on the profile which extends to a depth of about 4 kilometres: see Figure 3.

Note that plan number BF 89-10 which accompanies Hicks (1989) report the positions of S1 and S2 have been reversed. Hamlyn (1982) also reports the positions of the holes in the reverse of the correct position. For clarification of the drill hole positions see Figure 2. This error is a reflection of the lack of a comprehensive compilation of data to date.

## 6 COMMENTS ON EXPLORATION TO DATE

Exploration of Salisbury Hill has been carried out with two targets in mind: repetitions of the reefs mined at Beaconsfield and low grade-large tonnage stockworks (Pease, 1984; Hicks, 1989). Bishop (1988) suggested that the possibility of the existence of other styles of mineralisation, for example, a replacement gold deposit in calcareous sediments. However, a limited view of possible mineralisation styles has persisted during recent exploration despite the existence of a third style of mineralisation in the Salisbury Hill workings - the gold bearing gossanous siliceous formations related to serpentinite/dolomite rocks (Poltock, 1980). There has been no drilling which has tested for this third style of mineralisation.

The search for reef style mineralisation is logical considering the similarity of the geological similarity at Salisbury Hill and the Tasmania Mine. The search for reefs has been further encouraged by the identification of geophysical linears crosscutting through the Cabbage Tree Formation on Salisbury Hill (Bishop, 1988). These linears could represent expressions of a fault set similar in attitude to the fault which hosts the Tasmania Reef. Bishop (1988) suggested that a VLF electromagnetic survey could help in "detecting large scale, but often weak, conductors such as are commonly formed at geologic contacts and along faults or fractures".

No fault was detected in the only diamond hole drilled to test for reef style mineralisation, S5. Pease (1984) has suggested why this may be so: see section 5.3. So, the Johnson Creek geochemical anomaly remains unexplained. The other five diamond drill holes were all drilled sub-parallel to the known strike of reefs in the Beaconsfield area.

The search for stockwork style mineralisation has concentrated around the group of old workings at the southern end of Salisbury Hill. Five diamond drill holes beneath these workings have failed to intersect any significant gold mineralisation. The occurrence of gold in the Powerline Adit remains unexplained. The antimony anomaly outlined by the soil sampling and drilling led Pease (1984) to suggest that a gold bearing zone may be nearby; he suggested that core from the drill holes be assayed for a range of elements in attempt to determine the direction from the drill holes to a potential gold bearing zone. This supports Twelvetrees (1903) opinion that the pyritic conglomerate in the Duchess of York tunnel suggests proximity to a reef.

Schultz (1987) reviewed the data for the area near and around the old workings and concluded that the possibility exists for a mineralised zone between the surface and the base of weathering for a mineable stockwork and alteration zone located around a steep east dipping fault. He suggested a programme of percussion drilling to test this idea.

The four diamond drill holes which have been drilled by exploration companies have been sited to test geochemical anomalies. Not surprisingly, these anomalies have generally coincided with areas which have been mined in the past. However, other areas where mining has taken place, and where no geochemical anomaly has been recognised have been

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ignored. Consequently, the areas on the north and south banks of Eaglehawk Gully have not been tested at all, and testing around the main body of old workings at the south end of Salisbury Hill is incomplete.

As well as the particular issues discussed above, three general points can be made.

First, exploration in the Beaconsfield area in the past has been directed at finding a gold deposit which, together with the Tasmania Reef, would be the basis of a profitable enterprise. The resource contained in the Tasmania Reef is now considered to be profitable as a stand alone operation. Consequently, any ore found separate from the Tasmania Reef, will be incremental to requirements; this means that smaller, or lower grade, deposits can be mined and treated profitably. The grade-tonnage target we are seeking has become smaller.

Second, it should be borne in mind that any reef bearing structure will not necessarily be mineralised at its surface outcrop. The tops and bottoms of Beaconsfield style reefs have never been observed and so the nature of the tops and bottoms is not known. Regional gravity interpretations suggest that the base of the favourable slice of Lower Palaeozoic rocks in which the Beaconsfield and Salisbury Hill deposits occur is up to 6km in vertical thickness. The possibility arises, therefore, that completely concealed gold deposits may occur in the area.

Third, apart from reef and stockwork style mineralisation, the possibility exists for other styles to be discovered, for example, Carlin or Nagambie style deposits. At this relatively immature stage of exploration, the aim should be to look for gold, not particular types of gold deposit.

## 7 RECOMMENDATIONS

The possibilities for finding a gold deposit in the Salisbury Hill area have been enhanced by recent exploration. A large slice of prospective rocks is available for exploration.

Exploration to date has identified several targets, testing of which has commenced but not completed. These targets should be pursued and new targets identified.

A synthesis is needed of all the data available to date. Many separate plans exist showing different features; for example, there are separate plans of rock types, faults, BLEG samples, magnetics, mine workings and channel samples. An informed synthesis of this data will reveal further targets. This compilation has been commenced: see Figure 2.

After the data have been adequately compiled the specific tasks recommended by previous workers should be re-evaluated and executed where warranted. These tasks include:

- a programme of closely spaced power-auger samples on lines running north south to delineate east-west fault structures (Pease, 1984);
- detailed assaying of diamond drill core from the diamond drill holes to help to determine the positions of the drill holes relative to an inferred occurrence of gold mineralisation (Pease, 1984);

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- a VLF electromagnetic survey to help in detecting large scale, weak conductors which may be associated with geological contacts, faults or fractures (Bishop, 1988);
- a percussion drill hole programme to test the area near and around the group of old workings at the south end of Salisbury Hill for near surface mineralisation (Schultz, 1987).

*During the next year, three specific tasks which will assist in the definition of drilling targets are recommended:*

- BLEG analysis of stream sediment samples collected at closer spacing than previously employed;
- sampling of rock outcrop over the whole area of the Licence; rock outcrop is poor to moderate only;
- detailed (1:500 scale) mapping and sampling of exposures in all accessible old workings: adits, pits and trenches.

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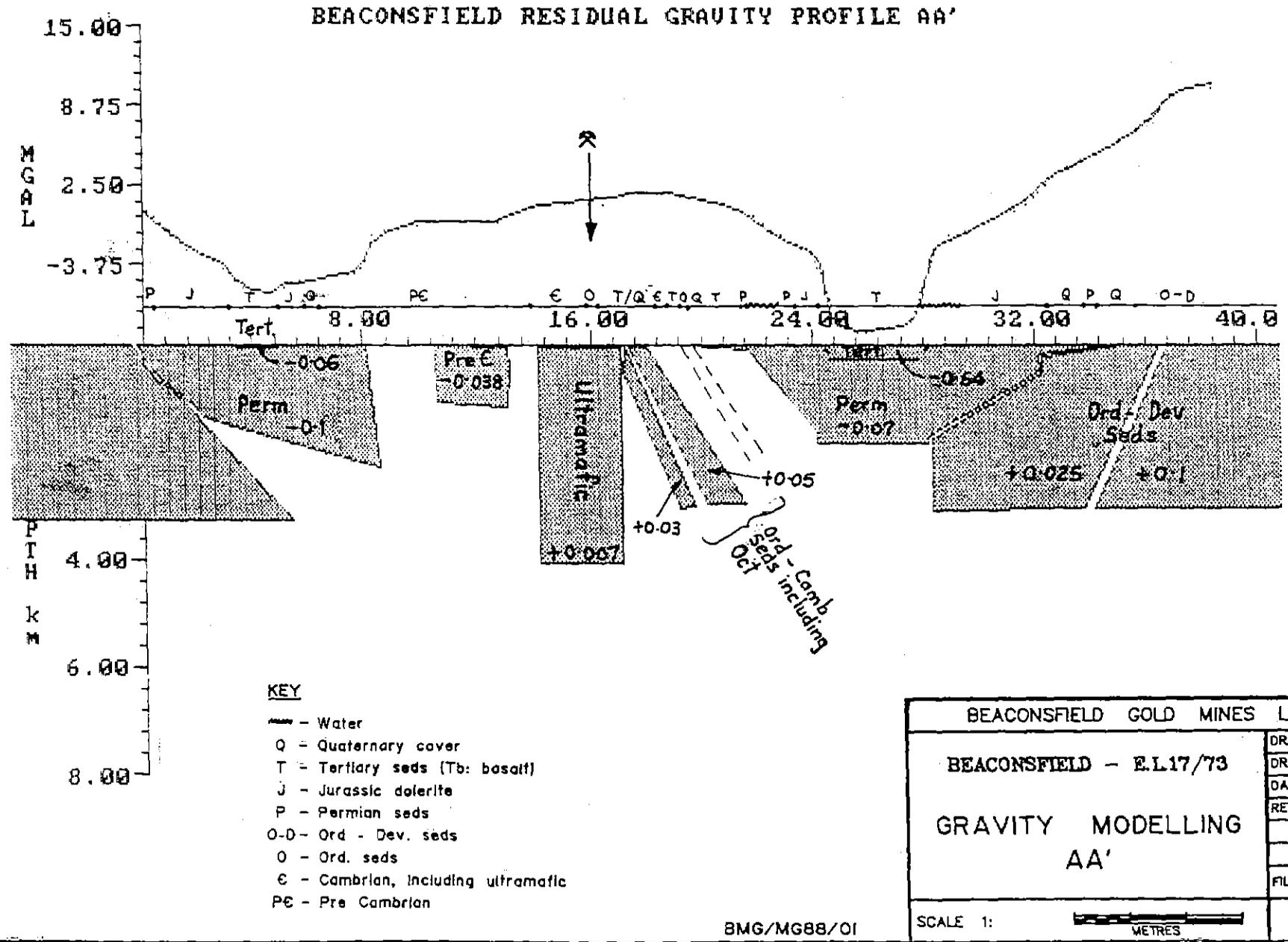
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Figure 3 Cross sectional gravity interpretation through the Tasmania Mine



95-3797

EL 20/94 BEACONSFIELD EXPLORATION  
REVIEW OCTOBER 1995 - ALLSTATE  
PROSPECTING - M V MCKEOWN

FIGURE 1

320020

BEACONSFIELD  
4843

TASMANIA 1:25 000 SERIES

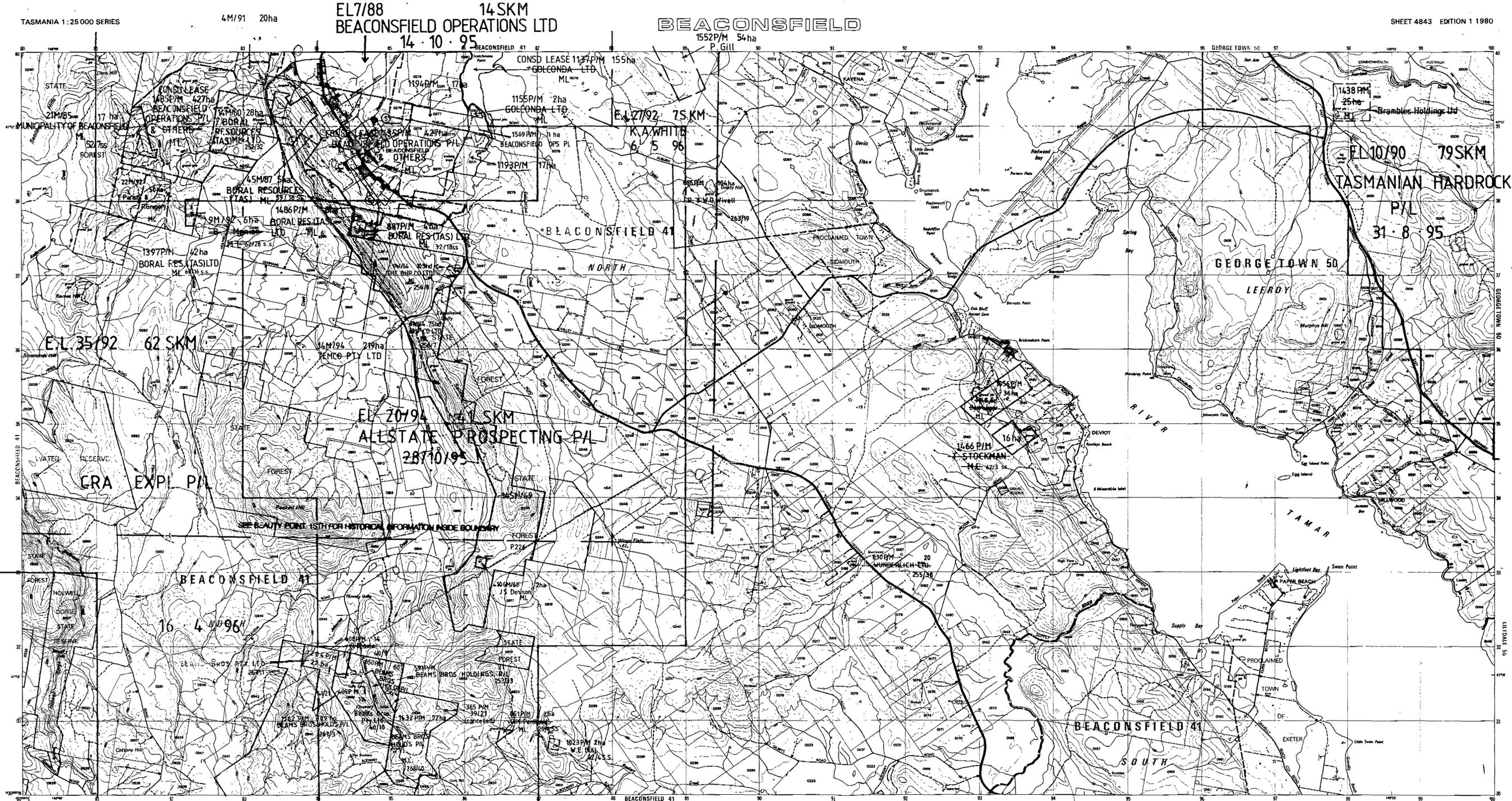
4M/91 20ha

EL7/88  
BEACONSFIELD OPERATIONS LTD  
14 10 95

BEACONSFIELD  
1552P/M 54ha  
P Gill

SHEET 4843 EDITION 1 1980

TASMANIA  
1:25 000  
SERIES



BEACONSFIELD  
4843

PRODUCTION Mapping Division, Lands Department, Hobart, 1980  
ACCURACY Horizontal 80% of wall distance detail is within 12.5 metres of true position  
Vertical 90% of elevations are within 2 metres. These elevations may not be shown in all areas of these topographic maps.  
RELIABILITY Topographic detail compiled from aerial photography from 1976 with field verification 1975.  
PUBLISHED DATE 1975. Topographic names have been approved by the Nomenclature Board of Tasmania.  
PUBLIC POINT OF VIEW Reads or tracks on this map do not necessarily indicate a public right of way.  
To assist in correcting future editions of this map, errors, omissions and anomalies are invited to be written to the Director of Mapping, GPO Box 444, Hobart, Tasmania, 7001.  
© TASMANIAN GOVERNMENT

PROJECTION Universal Transverse Mercator (UTM)  
HORIZONTAL DATUM Australian Geodesic Datum 1980  
VERTICAL DATUM Australian Height Datum (Tasmania) occupying  
of datum above mean sea level as used in the  
GRID 1000 metre intervals of the Universal Transverse Mercator  
Grid Zone 58 (Tasmania) Mean Grid, Australian National Standard  
Grid values are shown in full at the north west corner of the map  
CONTOUR INTERVAL: 10 metres with 50 metre index contours.  
WORLD GEODETIC SYSTEM 1972. To convert coordinates from this  
system to Australian Geodesic Datum 1980, increase the value of  
longitude by 0.2" and decrease the value of latitude by 0.2". To obtain  
heights decrease contour heights by 0.00 metres.  
MAGNETIC VARIATION True, Grid and Magnetic North are shown  
separately for the corner of the map. Magnetic North is correct  
for 1980 and moves annually about 0.1" every three years.

Build-up area with commercial centre  
Roads maintained for  
containing public use  
Road of restricted  
use or access  
Walking track, Bridge  
Light railway  
Power transmission line and pylon positions  
Building, Features of special interest, Ruin, Mine  
Post office, Police station, Fire station, School

1000 750 500 250 0  
SCALE 1:25 000  
1 centimetre represents 25 metres

Caravan park, Camping ground  
Rubbish disposal area, Cemetery  
Transferring station, Sign structure  
Contour with value, Depression contour  
Dairy or open cut mine  
Broken rocky surface  
Dense forest, Medium forest  
Low dense vegetation, Distinctive areas  
Orchard, Pine plantation  
Woodbank  
Swamp, Land subject to flooding  
Waterfall, Rapids  
Islands, shoals or floodbank, Levee  
Tidal rocks or ledge, Offshore rock  
Lighthouse, Topped wreck  
Sand tidal reef  
Saline coastal flat, Tidal flats  
Jetty, Launching ramp

BOUNDARIES shown on this map are NOT authoritative. For full particulars please consult the Registrar,  
General Department of Lands Department.  
"Easement" boundaries are shown as at February 1980, areas within proclaimed towns or less than two  
hectares are not depicted. To give a property reference, give the property number with municipality number.  
Municipality name  
Municipality number  
Word name  
Town boundary  
Reserve boundary  
Property boundary and number

MEAN TEMPERATURES

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1000 METRE SQUARE OBSERVATION	20.5	19.5	18.5	17.5	16.5	15.5	14.5	13.5	12.5	11.5	10.5	9.5

UNIVERSAL GRID REFERENCE

UTM	50	51	52	53	54	55	56	57	58	59	60
41	148 50	148 51	148 52	148 53	148 54	148 55	148 56	148 57	148 58	148 59	149 00

