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NEW CONSOLIDATED GOLD FIELDS (A'SIA) PTY. LIMITED.

No. 3/1969.

NORTH DUNDAS PROJECT, TASMANIA
(S.P.L. NO.20)

PROGRESS REPORT

FOR

1968-1969 FIELD SEASON

BY

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geologist.

AMG REFERENCE POINTS ADDED

Date: 30th April 1969.

CONTENTS

ILLUSTRATIONS

INTRODUCTION

This report summarises the activities of the 1968-1969 field season in Special Prospectors Licence No.20 at North Dundas, Tasmania. Activity ranged over the full extent of the S.P.L., and overlapped the western boundary into S.P.L. No.27 held by Renison Ltd.

S.P.L. No.20, of 1980 acres is held by Mt.Lyell Mining and Railway Co. Ltd., and is due for renewal on the 16th August 1969.

The previously existing Montezuma Falls camp, accessible to four-wheel drive vehicles, was improved and used throughout the season. A camp,consisting of tents and a lean-to, was set up at the intersection of the Carbine Track, Wallace's Tram and Great Northern Creek in the south of the S.P.L. This, referred to below as the Southern Camp,was used intermittently by line cutters and field party throughout the season.

During September 1968, an attempt was made to bulldoze a vehicular track along Wallace's Tram from Confidence Saddle to the Southern camp site. This attempt was abandoned after less than 2000 feet of advance because of extremely wet conditions.

The field season was markedly wetter than that in 1967-1968.

ACTIVITIES OF THE 1968-69 FIELD SEASON

GENERAL

Field work was carried out between 27th September 1968 and 28th March 1969. One geologist (the writer) worked on the project throughout the season. Three University students on vacation and four field assistants on loan from Renison Ltd. worked for varying periods on the project.

Three track cutters, working intermittently between 20th October 1968 and 6th February 1969, added 50,850 feet of line to the previous grid,cleared 20,400 feet along major creeks, and reopened 64,800 feet of old paths, logging tracks, and water races. Numerous old workings and sundry paths were also cleared by the field party.

SURVEYING

The accompanying plates are based on tape, compass and clinometer surveys of paths, trams, water races and workings,

and on rough tape and compass traverses along the major creeks. Only odd, short sections of lines examined in 1968-1969 were surveyed: line locations are based only on the points of intersection with the paths, etc. The positions of sample holes are thus approximate on these lines: all holes were surveyed in 1967-1968.

GEOLOGICAL MAPPING

Detailed mapping was continued in the northern half of the S.P.L., with particular attention being paid to the North East Dundas Railway. Lines, paths, creeks, workings and races in this half were examined. Results of this work have been plotted on 1" = 200 feet scale working sheets.

Reconnaissance mapping was carried out in the southern half of the S.P.L. along paths, Great Northern Creek and parts of Avon and Severn Creeks, and around the many workings. Lines were not examined, and soil sampling logs were not precise enough to allow the inclusion of observations on the geological plan.

Results of the reconnaissance mapping an a summarised version of the detailed mapping in the northern half are shown on Plate 1.

Four lode specimens were examined by AMDEL, South Australia. A small number of slides were prepared by Mt.Lyell Mining and Railway Co. Ltd.

GEOPHYSICS

A McPhar M700 portable magnetometer was hired from McPhar Geophysics of South Australia for two months. All lines (including the western ends of lines 0 to 5 from which soil samples were not taken) most of the paths, the long water race, west of Great Northern Creek, Wallace's Tram, and the North East Dundas Railway formation between Great Northern Creek and Confidence Saddle and near Bonnie Point were surveyed with this instrument. Readings were generally taken at 50 feet intervals, reduced to 25 feet or less when the intensity (of the vertical component of the earth's field) exceeded 750 gammas. Corrections were made for diurnal variation.

A base reading of -400 gammas was assumed at the Montezuma Falls camp.

Trial traverses were made over the Frazer Mine along lines 3 and 2A using a McPhar portable VHEM unit on loan from Mt.Lyell Mining and Railway Co. Ltd.

GEOCHEMISTRY

A total of 934 samples, predominantly of residual soil and bedrock, but including alluvium, gossan and mullock samples, were taken at approximately 100 feet intervals from all lines as shown on the Plates. With the addition of the 146 samples taken in the 1967-1968 season, only the western ends of lines 0, 1, 2, 3, 4, and 5 now remain unsampled.

Samples were taken at a maximum depth of 7 feet using 3 inch diameter hand augers which were fairly satisfactory for this reconnaissance sampling.

Spectrographic analyses for Cu, Pb, Zn, Ag, Sn, Ni, As and Sb were done on all samples by AMDEL, South Australia.

A further 8 alluvium samples were analysed for Sn by x-ray fluorescence by Renison Ltd. and for Au by fire assaying by Mt.Lyell Mining and Railway Co. Ltd.

BRIEF DESCRIPTION OF OLD WORKINGS

Many old workings located during the season are shown on the accompanying plates and referred to below. A brief description to introduce the more important workings is here included. Sources for much of the information are the following reports or publications.

1. Blissett (1962); Zeehan; Tas. Mines Dept. Geol. Survey Explanatory Report.
2. Montgomery (1896): Report on the Zeehan-Dundas Mineral Fields; Mines Office, Launceston.
3. Nye (1931): Report on Dunn and Archer's Prospecting Operations; Tas.Mines Dept. Report.
4. Reid (1925): The Dundas Mineral Field; Tas. Mines Dept. Bulletin No.36.
5. Shakesby and Elms (1966); Tin Prospect (Williams, Green and Grills) North East Dundas Tram; Cons. Synd. Report.
6. Smith (1898); Report on the Mineral Fields in the neighbourhood of Mt.Black, Ringville, Mt.Read and Lake Dora; Govt., Geol. office, Launceston.
7. Stillwell (1935); An occurrence of gersdorffite, Tas. Aus. I.M.M. Proc. 100.

8. Thompson (1951): Jamesonite Prospects, Dundas and North Dundas, Tas; Zinc Corp. Memo No.210 (Available at Tas. Mines Dept.)

9. Waller (1902): Report on the Ore Deposits (other than those of tin) of North Dundas. Report Sec. Mines, Tas. (1901-02)

The primary ore deposits at North Dundas are fissure vein deposits with complex mineral assemblages. Silver-lead-zinc-copper veins are most evident in the south and east of the S.P.L. These may carry any of galena, sphalerite, chalcopyrite, tetrahedrite, jamesonite, bismuthinite, arseno-pyrite, pyrite, pyrrhotite or stannite in quartz and siderite. Pyrrhotite-arsenopyrite-chalcopyrite-cassiterite veins, similar to the Reniosn Ltd. Federal Lode occur in a rather narrow zone near and north of Green's Prospect, and the Frazer Mine. Pyritic vein deposits, which may carry galena, jamesonite, chalcpyrite etc. appear to be closely associated with major faults.

Overlapping of these types does occur as, apparently, in Green's Prospect.

Rich shoots of ore were found but invariably these were small and the greatest production from any of the mines described below was about 1,000 tons. Brief descriptions of the Curtin Davis, Curtin Davis Extended, South West Curtin Davis and Frazer Mines appeared in the report on the 1967-1968 field season and will not be repeated.

There was a small, unrecorded, production of tetrahedrite bearing ore and extremely silver-rich gossan from the Bonnie Dundee Mine situated on the Ring River in the north east of the S.P.L. A vertical NNE striking orebody, attaining a width of 4 feet in the stopes, outcrops on both banks of the river and was worked from an adit in the south bank.

Green's Prospect (Williams, Green and Grills and perhaps the West Curtin Davis Mine) consists of 5 adits and trenches above, on, and below the North East Dundas Tram approximately 1,000 feet north west of the Frazer Creek crossing and from which there has been negligible production. The prospect was the subject of a joint report by Shakesby and Elms in 1966.

A one foot wide, vertical NNE striking quartz-deficient vein, and an intersecting south east striking, 77°NE dipping quartz vein up to 3 feet in width, were exposed in the workings.

Assays showed up to 0.98% Sn across the width of the adit drive following the narrow NNE striking vein. Pyrite, chalcopyrite and quartz have been recognised; pyrrhotite, cassiterite and galena are inferred from the sampling and the magnetic and geochemical surveys.

The main workings of the Hecla Mine lie from 600 to 800 feet south of the North East Dundas Tram crossing over Great Northern Creek. The main adit was driven over 200 feet on a SSW striking lode up to 27 inches in width which had been explored above in trenches and from a winze. Some stoping and winzing was done from the main adit, but no production was recorded. Two adits and a trench immediately north of the main adit showed the lode to be poorly mineralised. The ore in the main adit was complex; it carried chalcopyrite, bismuthinite, marcasite, pyrrhotite, pyrite, arsenopyrite, gersdorffite, sphalerite, galena, bournonite and jamesonite in a sideritic gangue. Reid recorded an assay done on ore from the dump at the mouth of the adit as Ag 25 ozs./ton, Cu 2.85%, Bi 2.77%. Reid believed that the above lode was exposed in the adit located 900 feet NNE of the main adit. In this, a 5 feet wide pyritic lode carries pyrrhotite, chalcopyrite, arsenopyrite and bismuthinite. As shown on Plate 1, this does not appear to be just a simple extension, but rather another orebody.

The south western extension of this latter pyritic orebody, or of the structure carrying it, may be the 7 feet wide NNE pyrite lode exposed in the northern end of the main Great Northern Creek Mine (including Carbine Mine and Tramway veins of Reid) workings in the SW corner of SPL No.20. A vertical NNW striking "galena lode", apparently intersected by the pyritic lode, was worked in an adit and trenchs in the main workings: over 10 tons of ore had been recovered from the surface workings before Waller's visit in 1902. This lode is 4 feet wide and carries galena, sphalerite, pyrite, jamesonite and tetrahedrite in quartz and siderite. Tetrahedrite-rich ore assayed 77 ozs./ton Ag and 6.5% Cu.

A number of other lodes were tested in the vicinity of the main workings. 10 tons of ore assaying 64% Pb and 75 ozs./ton Ag were recovered from a trench which is probably that located about 100 feet east of the intersection of the baseline and Wallace's Tram (see Plate 1.)

Reid described the Evenden Prospect as an adit driven into the south bank of a tributary of Great Northern Creek. Reid incorrectly located this creek on his plan, and it is likely that the workings shown on Plate 1 are those examined by him. Here a narrow NNW striking, 70°W dipping lode carrying galena, sphalerite and pyrite in a sideritic gangue was worked from two adits and a shaft. No production was recorded.

The location of Ramsdale's Prospect is also uncertain. In 1931, Finucane described a "Ramsdale's Prospect" but his plan closely resembles that made by Thompson in 1951, of workings outside the eastern boundary of the S.P.L. (in old M.L. 49M/48.) Reid described a 2-3 feet wide gossan lode, with NNE strike and Ag content of from 30 to 100 ozs./ton, explored in a deep trench and a shaft lying between the Evenden Prospect and the present Southern Camp Site. Such a trench was located, but the shaft could not be found. No production was recorded.

Thompson sampled the dump outside the adit drive at the old timber mill east of the Southern camp site in 1951. Results were: - 10% Pb, 33 ozs./ton Ag, 9.9% Zn and 2.9% Sb. The NNE striking lode carries pyrite, chalcopyrite, galena, sphalerite and jamesonite.

Further to the east lie workings which are probably those called Wallace's Prospect by Reid. Higgins and party had produced 20 tons of jamesonite-rich ore from a small open cut in a lens of ore here at the time of Thompson's visit in 1951. Metal contents in this ore were approximately 41.7% Pb, 21.7% Sb, 1% Zn, 1.3-7.8% As, 2.0% Cu and 5-30 ozs./ton Ag. No previous production is recorded. Two lenses were actually worked, the larger being 40 feet long and 2½ feet wide and carrying jamesonite, pyrite, arsenopyrite, stannite and sphalerite. The host fault strikes NNW and dips 70°W. The lenses appear to pitch steeply northward, but the lode was found to be much narrower in the lower adit.

About ¼ mile NNW of Wallace's Prospect, the apparent extension of the above lode has been tested for over 500 feet along strike in a number of trenches, adits and a shallow shaft. These workings are here called the ? Curtin Davis Consols Mine but there is difficulty in matching the old reports on this mine with current observations. The lode with its NNW strike dips 75°E, is up to 6 feet wide and carries pyrite, arsenopyrite, and sphalerite in quartz. Galena or jamesonite were not observed

on the dump, but may occur. Production was negligible.

Further to the NNE lies the No.1 Curtin Davis Mine on the south east side of the Godkin Ridge. At least 37 tons of ore assaying 115 ozs./ton Ag and 10% Cu were produced from this Mine. The ore carried galena, tetrahedrite, jamesonite, chalcopyrite, bismuthinite, arsenopyrite, pyrite and marcasite in a sideritic gangue. Most of the production was from a NNW striking, 60°E dipping orebody, from 2 to 3 feet wide in the stopes, that was worked from the lower adit crosscut. A footwall lode carrying arsenopyrite and pyrite was intersected in the crosscut and joined the main lode in the south drive. The upper adit crosscut, a shaft and trenches tested another lode with NW strike, 72°NE dip, and width to 2 feet found south west of the main lode and expected to intersect this latter just east of the shaft. This lode carried pyrite, sphalerite and galena, but the ore shoot was small.

In the South Curtin Davis Mine to the west of the No.1 Curtain Davis workings, two NNW steeply-east dipping lodes were exposed in surface workings. The western lode was worked in 3 adits and was up to 5 feet wide. It carried tetrahedrite, galena, sphalerite, pyrite and chalcopyrite in siderite. A branch vein, location uncertain, was worked in one of the adits. Production of primary ore and gossan was at least 240 tons, with estimated assay of 162 ozs./ton Ag, 16% Cu and 3.7% Pb.

Two adits were driven on a 4 feet wide, vertical, NW striking fault about 300 feet south west of the main workings. The fault carried some arsenopyrite.

The Block 291 Silver and Copper Mining Coy. workings consisting of 2 adit drives, a long adit crosscut, a small open cut, a shallow shaft and trenches, in the old ML 302-93M are shown on the plans as the Block 291 Mine. (Blissett calls them "Block 302".) The southward extension of the orebody was worked, outside S.P.L. No.20, in Block 291-93M (Orr's Section) and beyond in the old Central Curtin Davis lease. Thompson examined the Block 291 Mine in 1951 when it was included in Higgin's ML 48M/48.

At least 26 tons of ore containing 2211 ozs./ton Ag and 1 ton of Cu were produced from the vertical, NW striking pyritic body which is up to 7 feet wide in the open cut.

Occurring in the ore are jamesonite, galena, tetrahedrite, chalcopyrite, siderite and quartz. Thompson's assays are as follows :-

1.	Open Cut	7 feet width	1.4% Pb, 4.8 ozs./ton Ag
2.	Dump (open cut)		21.9% Pb, 37 ozs./ton Ag, 5.8% Sb
3.	Adit crosscut, below outcrop:	110 feet 38" width	7.5% Pb, 11.7 ozs./ton Ag, 1.2% Sb.

An adit west of the main workings follows a jamesonite-bearing vein which, projected, intersects the main pyritic lode at the open cut.

Finally, the alluvial workings near Ringville. Dunn and Archer recovered small quantities of alluvial cassiterite while prospecting along the western edge of the Great Northern Creek alluvial flat, and in an adjacent tributary which carried "good values" at least 10 chains upstream.

The workings along the eastern edge of Great Northern Creek alluvial flat, and at Ringville, were probably first worked for gold during the early 1890's. Analyses show high concentrations of tin in the races of some of the workings.

Workings in a northward flowing gully to the north west of Dunn's and Archer's workings are not mentioned in the old reports. Cassiterite was probably recovered.

OBSERVATIONS AND RESULTS

GEOLOGY: GENERAL

Platelis a reconnaissance geological plan of S.P.L. No.20. The results of more detailed mapping in the northern half of the S.P.L. are shown on 1 inch = 200 feet scale working plans.

In last year's report, argillaceous lithic greywacke was distinguished from a sequence of black shales, siltstones, volcanics and coarse clastics in the northern half of the S.P.L. Extension of detailed mapping in this half to the west indicated that the lithic greywacke (with which are interbedded greywacke conglomerates) east of Frazer Creek are similar to the lithic greywacke interbedded with the greywacke conglomerate (the Cambrian Razorback Conglomerate) outcropping near Confidence Saddle. Greywacke lithology was described in the 1967-68 report.

Black shales and siltstones at Confidence Saddle have been included in the Hodge Slate formation following the lead of the regional mappers. With this exception, there appears to be no major distinction, other than local variation in the volcanics content, in the shale/siltstone sequence mapped throughout the northern half of the S.P.L. Accordingly, these are now referred to the Cambrian Brewery Junction Formation, which is younger than the Razorback Conglomerate Formation. Thus last years conclusion that the shales/siltstones may be older than the lithic greywacke is contradicted. A description of these sediments and the volcanics is included in last year's report.

In the southern half of the lease, guided by Blissett to some extent, interbedded micaceous quartzites and graphitic shales are referred to the Upper Proterozoic - Lower Cambrian Oonah Shales and Quartzite Formation. These appear to be restricted in their distribution as shown, but it must be stressed that more work is required in this area to permit a full understanding. Elsewhere in the southern half, the Brewery Junction Formation sediments outcrop.

Intrusions of gabbro, presumed to be Cambrian, were found to occur east of Confidence Saddle and just west of the Southern camp. The phyllonite at the Frazer Creek crossing described in the 1967-68 report may have originally been such an intrusion. A fine grained ? basaltic dyke was mapped on Wallace's Tram.

A tourmalinised quartz porphyry dyke, quite similar to the Pine Hill quartz porphyry, was mapped near Confidence Saddle.

GEOLOGY:STRUCTURE

A general northward strike and eastward dip is indicated in the S.P.L., although, in detail, there is considerable distortion by folding and faulting.

Numerous northward-trending minor fold axes were again observed in the Brewery Junction Formation, particularly in more intensely faulted areas. A number of axes could reasonably be inferred from bedding irregularities. Major folding was not yet clearly indicated.

Faulting is fairly intense throughout the S.P.L. Reference of the block of lithic greywacke between Frazer and Montezuma

creeks to the Razorback Conglomerate formation implies the existence of major NNE-striking, and intersecting NNW striking, faults shown on Plate 1. Observations strongly support the existence of these faults. Major faulting, with as yet considerably less support from observation is also implied by the reference of sediments to the Oonah formation and by the apparent cut-off of volcanics at the south end of the Godkin Ridge.

Most other faults, mineralized or not, are in general sympathetic to either of the major NNE and NNW-NW trends. The NNW-trending fault zones have a tendency to terminate against the major, through-going NNE structures in agreement with the assessment by the regional mappers in this area. This can be seen in the vicinity of the Great Northern Creek and Frazer Creek crossings by the North East Dundas Tram.

GEOLOGY:LODES

Faults of both major trends have been mineralised. Favoured deposition sites are at fault intersections (for example, the Hecla Mine, Great Northern Mine)and in irregularities or bends in the fault plane as in the South Curtin Davis Mine.

Pyritic ore bodies appear to favour major fault planes. The silver-lead-zinc-copper lodes (referred to as the Curtin Davis type in 1967-68) occur as thin lenses within narrow channels mineralised in some cases over a considerable strike length and depth. It is of interest that nearly all such deposits are found east of the major NNE fault in S.P.L. No.20.

On the other hand, the pyrrhotite-arsenopyrite-chalcopyrite-cassiterite mineralisation is best displayed west of this fault. The observed ore bodies are once again narrow. A NNW trend is favoured by these bodies, and the available evidence suggests that they continue north of the S.P.L. in the general direction of the Renison Ltd. workings.

Mapping alone has thus failed to indicate the massive ore bodies required for profitable exploitation by the company. Certain trends are apparent, however, that will be again mentioned below after the results of the geophysical and geochemical surveys are discussed.

GEOPHYSICS

The main aims of the magnetic survey during the 1968-69

season were to improve the definition of the anomaly over the so-called Frazer Creek fault zone (anomaly VI-V on Plate 2) found in 1967-68, and to investigate the northward and southward extension of pyrrhotite and, hopefully, cassiterite, bearing mineralisation in this zone. In addition, a less intense anomaly trending NNE from the Frazer Zone anomaly was to be further investigated, and reconnaissance surveying of the S.P.L. was to be completed.

Results of the survey, plus results from 1967-68, are shown on Plate 2.

Magnetic anomalies, presumed to be caused by pyrrhotite mineralisation, were found only in the northern half of the S.P.L. in accordance with observation of pyrrhotite-arsenopyrite-chalcopyrite-cassiterite veins. No northward or southward extension of the Frazer Creek fault zone anomaly was located, and the traverse across line 4A suggested that the intensity of pyrrhotite mineralisation was much lower in the middle of the anomaly, again in accordance with observation in the workings and in Frazer Creek.

The anomaly did, however, extend westward to cover Green's Prospect as expected and indicated a considerable extension southward of one of the lodes in the prospect.

The NNE trending anomaly was found to be much less regular than indicated in 1967-68. Part of it, anomaly IV on Plate 2, shows a close relationship to the known lode exposed in the trench on line 3 as noted last year. Extensions north or south of this lode are not indicated.

Anomaly II supports other evidence of a tin-bearing quartz vein near Dunn's and Archer's alluvial workings. This lode may trend NNW.

Anomaly I, the most intense located in the survey, can not yet be related to an orebody. The projection of an arsenopyrite-bearing vein known on line 1A to pass through the anomaly will be referred to below. There was however, practically no response over this latter arsenopyrite-rich lode when line 1A was traversed, and mineragraphic examination of a sample from the lode showed that pyrrhotite was a minor constituent of the ore. The obvious conclusion is that lack of magnetic response does not preclude the presence of arsenopyrite or cassiterite.

Response over the Hecla Mine was poor, and pyrrhotite, known to occur in the mine, must be a minor constituent.

There is as yet no explanation for anomalies III and VIII, although III may be a southern extension of II.

The magnetic survey has proved to be most useful in the examination of this area. In - line reconnaissance traversing with the VHEM equipment used as a vertical loop-dip angle system, with separations of receiver and transmitter of 200 and 300 feet, was done on parts of lines 3 and 2A over the Frazer Mine lode. Response was sufficiently marked to justify some further testing of the method over the pyrrhotite-arsenopyrite-chalcopyrite-cassiterite veins in the area.

GEOCHEMISTRY

Results of residual soil sampling for lead, silver and tin proved to be the most significant and are shown on Plates 3 and 4.

Lead and silver contents were closely correlated. The distribution of anomalies is in close agreement with the observed distribution of the silver-lead-zinc-copper veins. In detail, most anomalies can be related to known Ag-Pb mineralisation with only anomalies H, J and K and the southern tails of anomalies, M, N and F as yet lacking an explanation. The results, therefore, do not greatly enhance the potential of the silver-lead-zinc-copper bodies.

Individual Ag-Pb anomalies were supported by zinc, copper, arsenic and antimony anomalies.

Tin contents may be more rewarding. Anomalies were anticipated only in the northern half of the S.P.L. on the basis of old reports, etc., so that the elongate anomaly H, roughly paralleling the ?Curtin Davis Consols - Wallace's Prospect line and including contents up to 500 ppm Sn (line 8) was unexpected. The source of this tin may be a NNW striking stannite- bearing lode passing between the South Curtin Davis mine and the No.1 Curtin Davis Mine - stannite was observed in Wallace's Prospect ore, there is a notable lack of a magnetic anomaly, and there is a strong indication of Ag-Pb-Zn-Cu mineralisation.

Anomaly G encloses the Green's Prospect workings. Its low intensity tail to the south is poor support for the magnetic anomaly VII (Plate 2). Anomalies E, B and C are closely related to known tin-bearing alluvial workings and/or pyrrhotite-arsenopyrite-chalcopyrite-cassiterite mineralisation.

Anomaly A, which includes contents up to 4000 ppm Sn, is by far the most interesting and promising anomaly. Alluvial workings in the gully east of it appear to have been for tin (700 ppm in sediment), a known arsenopyrite bearing vein is known to project northward into the anomaly, and an apparently major fault west of the Great Northern Creek crossing also projects into the area. There are indications of northward extension of the tin mineralisation supported by the intense magnetic anomaly 1.

Anomaly D, is not yet clearly understood as there is no other evidence of NNE faulting there.

Anomaly J is based on ore sample which may be alluvial.

The tin anomalies add up to a fairly narrow zone trending NNW across and out of the S.P.L. towards the Renison Ltd. workings. The zone is well supported by the magnetic survey and geological observation.

CONCLUSIONS AND RECOMMENDATIONS

The 1968-1969 field season has seen a considerable improvement in the understanding of the geology of S.P.L. No.20, particularly in the northern half of the area. Reconnaissance geochemical and magnetic surveying are almost completed, and it is now possible to narrow down the area requiring further detailed examination.

Most major workings have been located and examined. The areal restriction of the Ag-Pb-Zn-Cu orebodies in the workings to the south and east of the S.P.L. is supported by the geochemical survey. There is as yet little reason to expect other than small, scattered occurrences of this mineralisation. Further testing of these bodies is not recommended.

The pyritic ore bodies, as found in the Great Northern Creek mine and Block 291 mine, are only locally enriched in lead, etc, mineral and are too inaccessible to consider as a source of

pyrite: further testing is not recommended.

There is a good possibility of locating economic concentrations of cassiterite - bearing ore in the northern half of the S.P.L. It is recommended that further efforts be made to obtain the section of the Comstaff E.L. adjoining the northern boundary of S.P.L. No.20, and then that that section and the northern half of the S.P.L. be added to Renison Ltd.'s. Consolidated M.L.

Tin Anomaly A could be tested, initially along Line 1, by bulldozer trenching and later by drilling. Detailed geological mapping and magnetic surveying must be completed in the vicinity of the anomaly. The occurrence of pyritic black shales will hinder the application of VHEM and other geophysical tools, but these may assist in pinpointing areas of interest.

With encouragement from the results of this first stage, similar testing of anomalies B and E, and perhaps drilling of G, could be undertaken.

Detailed geological mapping is required over Sn anomaly H, which crosses the summit of the Godkin Ridge, before a recommendation for further work. The anomaly is in relatively inaccessible country, and it appears that the tin is derived from a complex sulphide ore rather than the pyrrhotite-arseno-pyrite-chalcopyrite-cassiterite type. Geophysical examination of this anomaly is recommended in view of the predominance of volcanics on the summit of the Godkin Ridge.

(Signed) D.L. FORSYTHE,
GEOLOGIST.

5304

PLATE No. 1

S.P.L.20
1980 Ac.

RINGVILLE

AMG 373190mE, 5368150mN

RIVER

BONNIE DUNDEE MINE

TO WILLIAMSFORD

BONNIE POINT

MONTEZUMA

LINE

TRANSMISSION

POWER

OLD

CONFIDENCE SADDLE

TO BENISON BELL

TO ZEEHAN

CREEK

FRAZER MINE

CAMP

DUNDAS

MONTEZUMA FALLS

TRAM

CURTIN DAVIS MINE

BLOCK 291 MINE

GREEN'S PROSPECT

CROWN CURTIN MINE

CURTIN DAVIS EXT'D MINE

SOUTH WEST CURTIN DAVIS MINE

NORTH-

WALLACE'S TRAM
DISUSED.

NORTHERN

DUNDAS

EAST

SUB

FRAZER FALLS

FRAZER

GODKIN

ROAD

No. 1 CURTIN? DAVIS MINE

SOUTH CURTIN DAVIS MINE

AVON

SEVERN

CREEK

SPL-21 LINE

HECLA MINE

BASE

GREAT

?EVENDEN PROSPECT

? CURTIN DAVIS CONSOLS MINE

GREAT NORTHERN CREEK MINE

OLD MILL SITE

OLD TIMBER MILL

WALLACE'S PROSPECT

CARBINE TRACK

? Puo

To DUNDAS

M N

Only this portion of the plan to

LEGEND

RECENT		Qra	ALLUVIUM
CAMBRIAN	BREWERY JUNCTION FORMATION	Cb	VOLCANICS CHERT BRECCIA
		Cb	BLACK SHALES, SILTSTONES.
	RAZORBACK CONGLOM.	Cra	GREYWACKE CONGLOMERATE & LITHIC GREYWACKES.
	HODGE SLATE	Ch	BLACK SHALES, SILTSTONES.
PROT.	OONAH QUARTZITE & SLATE	Puo	BLACK SHALES, QUARTZITE.

IGNEOUS INTRUSIVES

DEVONIAN	Dqp	QUARTZ PORPHYRY
CAMBRIAN	Cg	GABBRO, etc.

UNMINERALIZED FAULT, CLEAVAGE

MINERALIZED FAULT

7 GEOCHEM. PITS ON CUT LINES

PATHS, OLD LOGGING TRACKS

ROAD

WATER RACE

ALLUVIAL WORKINGS

AMG REFERENCE POINTS ADDED

RECONNAISSANCE MAPPING

FOR DETAILED MAPPING IN NORTHERN HALF OF LICENCE AREA, SEE 1"= 200' SHEETS

NEW CONSOLIDATED GOLD FIELDS (A/ASIA) PTY. LTD.
CONSOLIDATED SYNDICATE EXPLORATION

S.P.L. 20 - NORTH DUNDAS PROJECT

GEOLOGICAL PLAN

5 cm

Scale 400 FT. TO 1 INCH 22.4.69 D.L.F.

Enlarge this line to 25 cm

68-526

5304

5305

113018

PLATE No.2

S.P.L.20
1980 Ac.

RING RIVER

RINGVILLE

PCP1490

BONNIE DUNDEE MINE

To WILLIAMSFORD

BONNIE POINT

MONTEZUMA FALLS

CONFIDENCE SADDLE

To REVISON BELL

To ZEEHAN

WALLACE'S TRAM
DISUSED.

NORTH-EAST

NORTHERN BASE

SUB BASE

GEODYN RIDGE

FRAZER FALLS

FRAZER LINE

AVON CREEK

SEVERN CREEK

GREAT NORTHERN CREEK

DUNDAS TRAM

DUNDAS CAMP
BASE
-400

FRAZER MINE

GREEN'S PROSPECT

CROWN CURTIN MINE

CURTIN DAVIS MINE

CURTIN DAVIS EXT'D. MINE

SOUTH WEST CURTIN DAVIS MINE

No. 1 CURTIN DAVIS MINE

SOUTH CURTIN DAVIS MINE

CURTIN DAVIS CONSOLS MINE

BLOCK 291 MINE

HECLA MINE

?EVENDEN PROSPECT

?RUMSDALE PROSPECT

?GREAT NORTHERN CREEK MINE

OLD MILL SITE

OLD TIMBER MILL

WALLACE'S PROSPECT

CAMP

CARBINE TRACK

SPL 31 LINE

SPL 21 LINE

To DUNDAS

I II III IV V VI VII VIII IX

1A 1A' 2A 4A

1 2 3 4 5 6 7 8 9 10 11 12 13

7 GEOCHEM. PITS ON CUT LINES

PATHS, OLD LOGGING TRACKS

ROAD

WATER RACE

ALLUVIAL WORKINGS

5 cm

CONTOUR INTERVAL 500 ft

NEW CONSOLIDATED GOLD FIELDS (A/ASIA) PTY. LTD.
CONSOLIDATED SYNDICATE EXPLORATION

S.P.L. 20 .. NORTH DUNDAS PROJECT

GROUND MAGNETIC SURVEY
(VERTICAL COMPONENT IN ft)

Scale 400 FT. TO 1 INCH 22.4.69 D.L.F.

5305

5306

113019 PLATE No.3

S.P.L.20
1980 Ac.

RING RIVER

RINGVILLE

BONNIE DUNDEE MINE

TO WILLIAMSFORD

BONNIE POINT

MONTEZUMA

CONFIDENCE SADDLE

TO REVISION BELL

TO ZEEHAN

1A CREEK

2A

TRAM

FRAZER MINE

CAMP

DUNDAS

CREEK

MONTEZUMA FALLS

BLOCK 291 MINE

CURTIN DAVIS MINE

WALLACE'S TRAM
DISUSED.

NORTH-

EAST

GREEN'S PROSPECT

SUB

BASE

LINE

CURTIN DAVIS EXT'D MINE

PCP1488

NORTHERN

FRAZER FALLS

SOUTH WEST CURTIN DAVIS MINE

SOUTH CURTIN DAVIS MINE

GODKIN

AVON

SEVERN

CREEK

HECLA MINE

SPL 21 LINE

GREAT

CHARLOTTE

CURTIN DAVIS CONSOLS MINE

EVENDEN PROSPECT

RAMSDALE PROSPECT

OLD TIMBER MILL

WALLACE'S PROSPECT

CARBINE TRACK

TO DUNDAS

A B C D E F G H J K L M N P

LEGEND

ppm LEAD
0 – 200
B > 200

ppm SILVER
> 2

7 GEOCHEM. PITS ON CUT LINES
PATHS, OLD LOGGING TRACKS
ROAD
WATER RACE
ALLUVIAL WORKINGS

5 cm

NEW CONSOLIDATED GOLD FIELDS (A/ASIA) PTY. LTD.
CONSOLIDATED SYNDICATE EXPLORATION
S.P.L. 20 – NORTH DUNDAS PROJECT
RESIDUAL SOIL SAMPLING
ppm LEAD & SILVER
Scale 400 FT. TO 1 INCH 22.4.69 D.L.F.

5306

113020

PLATE No. 4

5307

S.P.L.20
1980 Ac.

RING

RIVER

RINGVILLE

BONNIE DUNDEE MINE

TO WILLIAMSFORD

BONNIE POINT

MONTEZUMA

CONFIDENCE SADDLE

TO BENSON BELL

TO ZEEHAN

A

B

C

D

E

F

G

H

J

CREEK

FRAZER MINE

CAMP

DUNDAS

TRAM

MONTEZUMA FALLS

BLOCK 291 MINE

CURTIN DAVIS MINE

?CROWN CURTIN MINE

CURTIN DAVIS EXT'D. MINE

SOUTH WEST CURTIN DAVIS MINE

WALLACE'S TRAM
DISUSED.

NORTH-
EAST

NORTHERN

GREEN'S PROSPECT

SUB BASE LINE

RIDGE

FRAZER FALLS

FRAZER

No. 1 CURTIN DAVIS MINE

SOUTH CURTIN DAVIS MINE

AVON

SEVERN

HECLA MINE

GREAT

CURTIN DAVIS CONSOLS MINE

?EVENDEN PROSPECT

?GREAT NORTHERN CASSITERITE MINE

?RAMSDALE PROSPECT

OLD MILL SITE

OLD TIMBER MILL

WALLACE'S PROSPECT

CARBINE TRACK

TO DUNDAS

M N

LEGEND

ppm TIN

- 0 - 10
- 10 - 30
- >30

7 GEOCHEM. PITS ON CUT LINES

PATHS, OLD LOGGING TRACKS

ROAD

WATER RACE

ALLUVIAL WORKINGS

5 cm

NEW CONSOLIDATED GOLD FIELDS (A/ASIA) PTY. LTD.
CONSOLIDATED SYNDICATE EXPLORATION

S.P.L. 20 - NORTH DUNDAS PROJECT

RESIDUAL SOIL SAMPLING
ppm TIN

Scale 400 FT. TO 1 INCH 22.4.69 D.L.F.

5307