000

GOLD FIELDS EXPLORATION PTY. LIMITED

506001

E.L. 2/63

MT LINDSAY AREA

ANNUAL REPORT 1982-83

By: P.A. Roberts
Senior Geologist

A.J. Cartwright
Geologist

August, 1983

001

GOLD FIELDS EXPLORATION PTY. LIMITED

506002

SUMMARY

Work completed during 1982-83 on E.L. 2/63 consisted of a helicopter-supported diamond drilling program on Parsons Hood and review of exploration data over the Mt.Lindsay Mine area. This program cost $64,400 to complete.

The Parsons Hood drilling program comprised two holes totalling 366m. Unfortunately results were disappointing. The first hole, ML61, intersected several, thin, tin-poor skarn zones which explained the observed geophysical anomalies at which the hole was targetted. The second hole, ML62, only encountered hornfelsed clastic sediments containing disseminated sulfides. The latter probably caused the very strong I.P. anomaly at which the hole was targetted. No further work is recommended in this area.

hornfels is not a verb!

Typical comment of the Tas. Geol. Survey!

In the Mt.Lindsay Mine area, the data review resulted in significant revisions to both the geological interpretation and the model of skarn formation. Moderate to shallow dipping faults are now thought to have been an important control on the formation of cassiterite mineralization. As a result, two major,shallow-dipping "pencil-shaped" zones have been identified with potential for more than 3 million tonnes of greater than 0.7%Sn mineralization.

The work completed in the past year has therefore re-focussed exploration interest on the Mt.Lindsay Mine area. Consequently in 1983/84, a two hole diamond drilling program is proposed there to test the revised skarn model. In addition, some limited bedrock sampling is recommended to test for outcropping cassiterite mineralization. This program is expected to cost $51,300.

002

GOLD FIELDS EXPLORATION PTY. LIMITED

506003

CONTENTS

003

GOLD FIELDS EXPLORATION PTY. LIMITED

506004

FIGURES

1. INTRODUCTION

E.L. 2/63 is located north of Renison Bell on the West Coast of Tasmania and covers an area of 90 square kilometres (Figure 1).

The licence area is generally rugged and heavily vegetated. Moderately good access is available in the southern part of the area via the H.E.C. Pieman Dam road and a number of four wheel drive tracks. The northern portion of the area is much less accessible, however, and exploration work there has relied heavily on helicopter support during the summer months.

Geologically the area comprises faulted and folded, north-west trending Upper Precambrian to Lower Devonian sedimentary rocks on the western limb of the Huskisson Syncline, intruded by a remobilized ultramafic complex along the Cambrian-Ordovician boundary. In the north-west corner of the licence area, the Devonian Meredith Granite intrudes both the sediments and ultramafics.

Prior to 1979, exploration was concentrated in the Mt. Lindsay Mine area where a series of carbonate-chert beds have been contact metamorphosed and tin-tungsten mineralized by the Meredith Granite. Since 1979, exploration has been carried out throughout the rest of the licence area unfortunately with generally disappointing results.

This report describes the results of a two hole drilling program directed at skarn targets on Parsons Hood and a re-evaluation of the Mt. Lindsay Mine data.

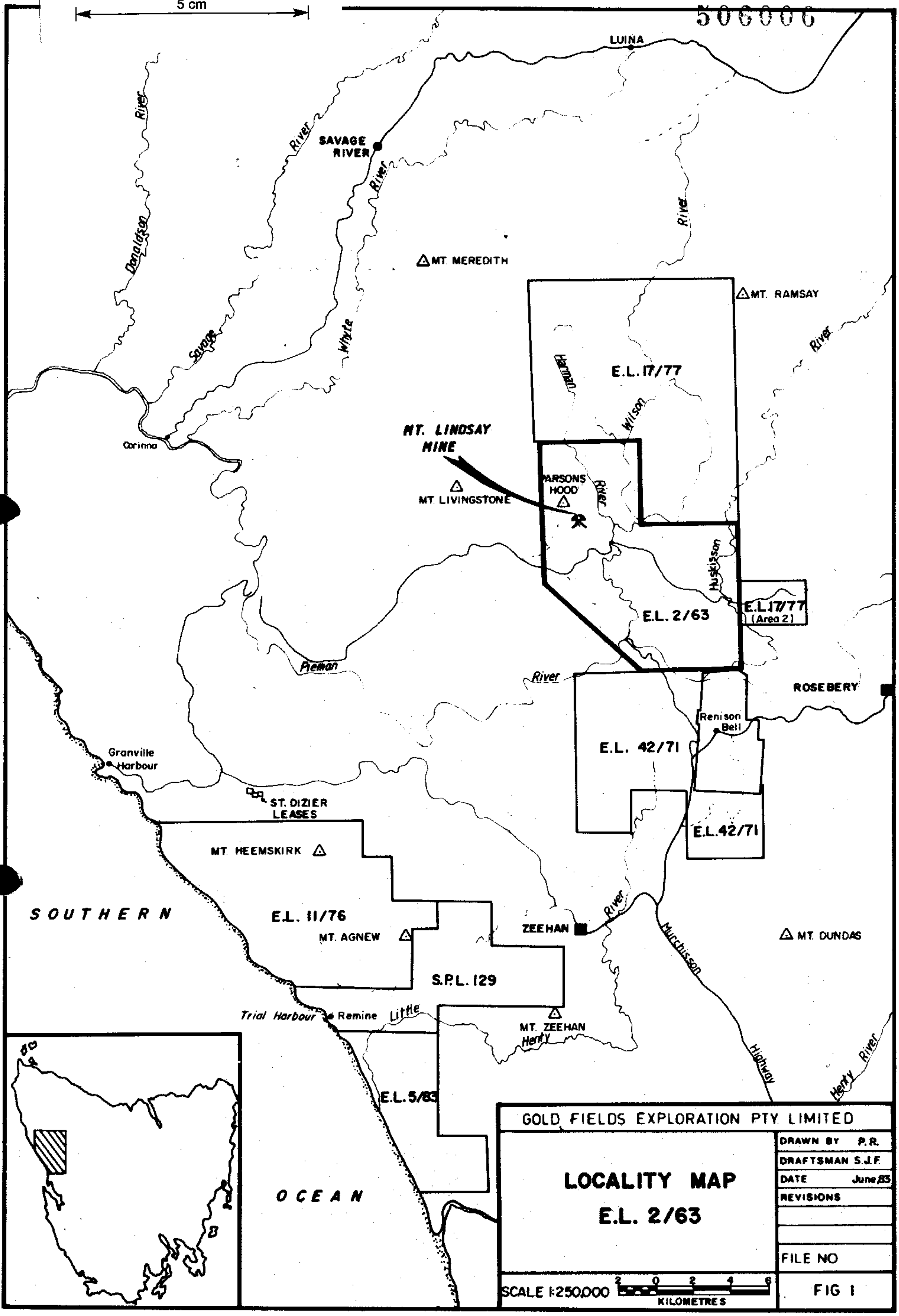
2. LAND TENURE

Aberfoyle Limited is the holder of E.L. 2/63. Since 1972, the area has been explored by a Joint Venture between Renison Limited, C.G.F.A., Paringa Mining

005

5 cm

506006



and Exploration Company Limited and Aberfoyle. Since July, 1982, Gold Fields Exploration has been the operator on behalf of Renison and C.G.F.A. At present, Renison is the sole financial contributor to exploration on E.L. 2/63 and the equity of both Paringa and Aberfoyle is currently being diluted. Under the terms of the Joint Venture Agreement, when Renison has solely contributed $200,000, the shares of the Joint Venturer's will be:

R.G.C. Group	74.0%
Paringa	15.5%
Aberfoyle	10.5%

Since September 1st, 1982, when Paringa and Aberfoyle stopped contributing, Renison has spent $59,951 towards the $200,000 goal.

3. PREVIOUS WORK

Exploration activity in the Mt. Lindsay licence area has occurred since the late 1950's and a brief summary is presented below. All available reports covering this work are listed in the bibliography.

1963 - 1970: Aberfoyle outlined five anomalous zones at and near the Mt. Lindsay Mine. The Main Ore Zone, No. 1 and No. 2 anomalies were partially tested by shallow diamond drilling. "Potential reserves" of 208,000 tonnes of 0.83% Sn were outlined in the Main Ore Zone.

1970 - 1972: Paringa undertook regional and semi-detailed ground surveys between Mt. Lindsay and Pieman-Wilson River Area.

1972 - 1973: Exploration commenced by Renison.

Road access created north of Pieman River. Airborne EM-magnetic survey. Semi-regional mapping of SW part of the area.

1973 - 1974: Continued access development. Misty Valley and Mt. Lindsay Grids cut over two anomalous areas. Detailed ground surveys commenced.

1974 - 1975: Continued access development to Mt. Lindsay Mine. Completion of major phase of ground work on Mt. Lindsay Grid.

1975 - 1979: Diamond drilling programmes on Mt. Lindsay Grid by Renison. Encouraging stanniferous skarn mineralisation intersected at Mt. Lindsay Mine and to the S.E. along strike from the No. 2 and Main Ore Zone Anomalies.

1979 - 1980: Establishment of Harman River Grid and Harman River access road from the H.E.C. Pieman Road. Establishment of Merton Hill Grid. Ground surveys carried out on both grids.

1980 - 1982: Ground surveys and diamond drilling at Merton Hill with discouraging results. Limited drilling in Mt. Lindsay Mine area to test skarn zoning model proposed by T. Kwak of La Trobe University. Detailed ground surveys on the Harman River Grid at Parsons Hood.

4. EXPENDITURE

Expenditure on E.L. 2/63 during 1982-83 amounted to $64,404. At the end of June, 1983, total Joint Venture spending on the project stood at $1,074,156.

Expenditure details are listed in Appendix 1.

5. PARSONS HOOD (A. Cartwright)

5.1. Work Completed 1982-83

All the work carried out on Parsons Hood this field season centred around a two-hole drilling program executed in January 1983. The drill holes were planned according to the proposals of Martin (1982), being situated on the slopes and summit of the rugged, bush-clad mountain, Parsons Hood (Figure 1).

The only ground access to the drill sites was via the cut grid lines of the Mt. Lindsay and Harman River Grids from the Mt. Lindsay Mine road. In September,1982, the contractors G., M. and M. Freeman and Astex Exploration Services cleared and constructed helipads, drill pads and water supply sites for the ensuing drilling program.

The drill holes were positioned on geophysical and geochemical anomalies. Limited surface geological information available was also used, and during October 1982, a brief geological reconnaissance was made by traversing the creeks close to the projected drill lines. This information supplemented the previously known geological data and the bedding attitudes so measured, were also useful in planning the holes.

In early 1983, upon completion of the drill holes, a consultant geologist (Dr. G. Morrison) examined samples of the core petrographically, and a consultant geophysicist (Dr. J. Bishop) undertook a down-hole I.P. Survey.

5.2 Results and Discussion

5.2.1 Geology and drilling

The first of the two holes completed at Parsons Hood this summer, ML61, was collared on the summit. The grid co-ordinates of the collar are approximately Line 6N, 2400mW and the hole was drilled inclined to the west at 50°, beneath Line 6N. A strong twin peak magnetic anomaly and a significant tin anomaly in the soil geochemistry occur over the drill-line. It was for this and stratigraphic reasons that the hole was located here. A summarised log of ML61 is given below with a full, detailed log in Appendix 3. The hole is also shown in plan view on Fig. 2 and is displayed in profile on Fig. 3.

ML 61

0.0 - 3.8m	Hornfelsed, fine grained sandstone and siltstone.
3.8 -17.7m	Skarn. Strongly altered calcareous sandstone and fine grained siltstone.
17.7 -93.6m	Weakly altered, hornfelsed sandstone and siltstone. Thin bands of chert.
93.6-101.5m	Skarn. Strongly altered calcareous sandstones.
101.5-150.3m	Unaltered, hornfelsed sandstone, siltstone and chert.

The skarn zones are selected sections of more strongly altered sediments were assayed for Sn, Cu, WO_3, Pb, Zn and Ag. The results obtained were very disappointing, with extremely low values recorded for all the elements.

A minor technical success was achieved with the hole, however, in that the two skarn zones intersected were enriched in magnetite, thereby explaining the dual magnetic anomaly observed on Line 6N (Fig. 2).

The second hole, ML62, was positioned on the north-eastern slopes of Parsons Hood, on Line 12N at 1575mW (approximately). The location of this hole, which was drilled at 40° to the west beneath Line 12N, is shown on Fig. 2 and a drill profile is depicted on Fig. 4. This hole was drilled primarily on a strong I.P. anomaly but also to test a second weak, co-incident soil geochemistry/magnetics anomaly. As with ML61, ML62 was also designed to give an idea of the general stratigraphy in the Parsons Hood area, these being the first holes drilled there.

A summarised log of ML62 is given below. A more detailed version can be found in Appendix 3.

ML 62

0.0 - 200.1	Hornfelsed, very weakly altered, sandstones and siltstones with thin, cherty and calcareous units.
200.1 - 216.0	Weakly altered, coarse grained, weakly porphyritic granite.

The sedimentary sequence in this hole contains abundant pyrrhotite with occasional flecks of chalcopyrite. These, together with the very thin (10-20cm) calcareous lenses were assayed but little encouragment was received. On completion of the drilling program ., the sum knowledge of the geology of the Parsons Hood area consisted of information from mapping along grid lines, creek beds and the two drill holes. This showed that the Crimson Creek Formation contains a wide variety of sedimentary lithologies which strike northwards, dip vertically or at a high eastern angle and are practically uncorrelatable over distances much greater than 100m (see Fig. 2). A consultant geologist, Dr. G. Morrison was used to help unravel the sedimentology of the sequence encountered in the drill holes, the metamorphic/metasomatic events that have occured and to explain why the assay values for the skarn zones in ML61 were so low.

Several important conclusions were reached in Morrison's report (given in full in Appendix 4) and these are:

(1) The mineralogy of the skarns and the surrounding hornfelsed sediments shows that all the elements necessary for skarn formation were derived from within the sedimentary rocks, there being no addition of Sn-F-Be-W from the granite (i.e. the skarns are reaction skarns).

(2) The absence of unreacted limestone (as marble) suggests that the original

calcareous units were almost totally consumed in the formation of reaction skarn, which rendered the rock virtually impermeable to mineralising solutions.

(3) One very small section of skarn from ML61 is typified by a red garnet-green vesuvianite-magnetite assemblage and this is thought to be a likely tin-bearing skarn.

It appears that the most favourable conditions for stanniferous mineralisation will occur within sequences with thicker limestone beds, probably at greater distances from the granite than ML61. This should enable greater development of magnetite-sulphide-cassiterite infiltration skarn at the expense of reaction skarn development.

5.2.2 Geophysics

The down-hole I.P. test work performed on ML 62 was only partially completed as drillers' grease left in the hole had a pronounced affect on the electrical signals. A magnetic susceptibility log of ML61 (displayed with the geological log in Appendix 3) was made. Detailed comments on the geophysics of both the holes have been made by Dr. Bishop and are given in Appendix 5.

In general, it appears that both of the holes intersected their geophysical targets with the two high magnetic susceptibility zones of ML61 corresponding well with the magnetic anomaly observed on the line above. In the case of ML62, the abundant disseminated sulphide probably accounted for the I.P. response observed on line 12N. I.P. testing of the core indicated very high chargeabilities associated with high resistivities at shallow de 'hs in the hole, corresponding to the target I.P. anomaly (Appendix 5).

It seems certain from the results of ML61 and ML62, that strong I.P. anomalies alone, in the Crimson Creek Formation, are not the best drill targets in stanniferous skarn search. More prospective anomalies are coincident magnetic, I.P. and geochemical responses, as the targets in this area are generally magnetite-sulphide-cassiterite skarns.

6. MT. LINDSAY MINE AREA (P. Roberts)

The location of the Mt. Lindsay Mine is shown on Figure 1. For the purposes of this report, the mine area covers a 500m thick section of the Crimson Creek Formation around the workings and up to two km along strike from them. The mine area includes all of the major skarn system which has been the main focus of exploration on E.L. 2/63.

A review of the exploration data from this area has become necessary for the following reasons:

(1) After 20 years of exploration on E.L. 2/63, it is the only prospect where significant stanniferous mineralization has been found to occur. The stanniferous skarn system is very large, and, despite a considerable drilling effort, there is still room for a significant tonnage of ore grade mineralization. If any further exploration is to be justified on the licence, the mine area must be given a high priority.

(2) In the last two years, there has been considerable progress in understanding mineralized zonation in the skarns and their genesis. A thorough re-interpretation of the data is a necessary part of reviewing the exploration implications of the genetic model.

(3) There has been no re-interpretation of the drilling data since 1978 despite the completion of six more drill holes in the mine area.

In May-July, 1983, the writer examined all the relevant geological, geophysical and geochemical data with a view to revising the geological interpretation. Before this could be done, it was necessary to amend the drill hole locality plan; a major surveying error made some years ago had resulted in virtually all of the drill hole collars being misplotted. Corrected drill hole co-ordinate data is attached in Appendix 6.

6.1 Stratigraphy

The interpreted stratigraphy remains unchanged. It comprises at least three major limestone (± chert) horizons in a sequence of hornfelsed basic tuffs, tuffaceous sediments, siltstones, shales and cherts. The latter may not be primary. The carbonates have been partially converted to a variety of skarn assemblages which include magnetite, pyrrhotite, amphibole, ilmenite, ilvaite, vesuvianite, garnet and patchy, minor cassiterite and scheelite.

The carbonate horizons are, from the youngest down:

No. 2 Horizon - limestone, minor chert; 20-50m thick; where metasomatized, generally converted to a sulphide-poor, magnetite skarn.

Main Ore Zone - limestone, minor chert; 10-35m thick; where metasomatized, generally converted to a relatively sulphide-rich skarn (cf. No. 2 Horizon skarns).

No. 1 Horizon - limestone and chert; 0-30m thick; more chert-rich than the other two horizons. Largely unaltered.

The carbonate horizons exhibit a surprisingly wide variation in thickness over relatively short distances. This reflects the interplay of three factors:

(1) The sedimentary environment at the time of deposition. The Crimson Creek Formation is generally regarded as a turbidite sequence; abrupt facies changes along strike are therefore quite likely.

(2) Faulting, resulting in well separated parts of the carbonate horizon being juxtaposed (see section 6.2 below).

(3) Patchy conversion of calcareous horizons to chert. The cherty "Mottled Zone" on the hanging wall side of the No. 2 Horizon may well be correlatable with carbonate within the No. 2 along strike.

6.2 Structure

(Note: all strike, dip directions in terms of AMG, not Renison Mine Grid).

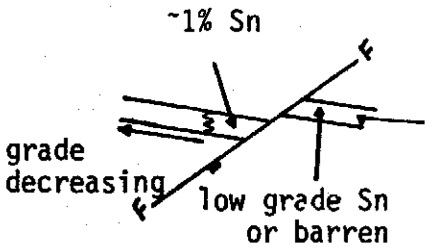
The sedimentary sequence in this area strikes north-west and either dips vertically or is steeply dipping to the south-west. Apart from the obvious large-scale folding, there is little other apparent fold deformation. There is significant faulting in the area, however; this is particularly apparent in the drill holes. Unfortunately surface geological mapping has not aided the interpretation much, mainly because outcrop is poor and fault movements are small (less than 50m).

At least two sets of faults appear to be present (see interpretive geological map, Figure 5):

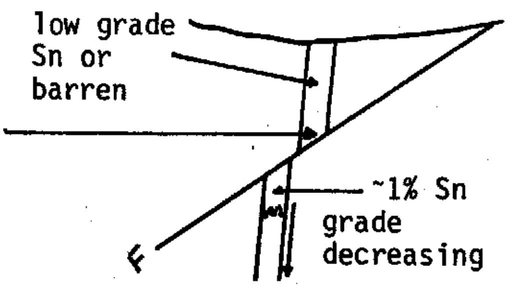
(1) ENE trending, moderate dips to SSE. In the immediate vicinity of the mine, three faults of this type have been mapped as offsetting the Main Ore Zone (Morton, 1964). They are designated Faults A, B and C. Of these, only Fault B offsets the Main Ore Zone sufficiently to produce a fault gap. It is perhaps significant that Fault B has also been an important ore control; tin grades are much higher in the Main Ore Zone on the fault's footwall side compared to its hangingwall side.

A fourth fault, D, is postulated directly east of the mine workings. It is suggested that this fault is oriented near-parallel to Faults A to C (but more shallowly dipping), and controls both the major tin concentration in the mine workings and the relatively high grade, cassiterite-bearing intersection encountered by drill hole ML38 in the No. 2 Horizon. The postulated tin grade distribution is illustrated below:

Plan View



Section View
(facing west)



Examination of the geological map and the structure contour plan (Figures 5, 6) reveals that there are some significant thickness changes in the carbonate horizons across the faults; this suggests that there is a significant dip-slip component in the fault movements. This may explain why the apparent strike-slip movement on Fault D is sinistral in the mine area and dextral around ML38.

(2) N-S trending, shallow dips to E. Only one fault of this type has been clearly identified, Fault E (Figures 5, 6). This appears to dip at 30 to 40° east. Examination of the structure contour plan, which has been intentionally left incomplete in the south-east part of the area, suggests that further low angle faults may exist at depth there.

Undoubtedly, there are major fault complexities in this area which the structural interpretation has not explained; unfortunately there is insufficient data to resolve all the problems. In addition, in some drill holes, it is not possible to demonstrate convincing evidence for fault planes where they have been predicted by the contours - perhaps, the faults offset one another (cf. Merton Hill). Nevertheless the general picture is considered credible because:

(1) Faults A to C are known to exist and almost certainly have been local ore controls. Fault D fits logically into this pattern.

(2) The limits of stanniferous skarn in the No. 2 Horizon and Main Ore Zone are offset relative to one another; this is apparent from drilling,

ground magnetics and soil geochemical data. A fault near-parallel to Faults A to C controlling the tin distribution explains this pattern.

(3) The association of significant faulting with ore grade mineralization is observed both in the immediate mine area and around ML38. It seems unlikely that it is purely co-incidental.

(4) It is very difficult to explain the pattern of carbonate and skarn intersections in the south-eastern part of the area without invoking some low angle fault movements (e.g. see Newnham and Schellekens, 1978).

6.3 Skarn Zonation and Genesis

Dr. T. Kwak's work on the Mt. Lindsay skarn has indicated the following history of skarn formation (Kwak, 1982):

Stage I The Stage I fluids are thought to have replaced limestone, outwards from the granite contact, with anhydrous, low sulfide assemblages. Two skarn types are observed:

IA: Magnetite-siderite-K-feldspar-ilmenite-quartz-cassiterite assemblage. Kwak suggests that this assemblage progressively replaced carbonate outwards from the granite. As new increments of fluid were undersaturated in tin, they constantly redissolved cassiterite from the interior of the skarn precipitating it at the reaction front. Consequently the cassiterite-bearing IA assemblage is only likely to occur at the outer limit of the skarn.

IB: Vesuvianite-red garnet-calcite assemblage. Kwak suggests that this forms an outer rim around the IA skarn (note the similarity with infiltration skarn assemblage described by G. Morrison from ML61, Appendix 4).

Stage II The Stage II fluids are thought to have replaced Stage I skarns, outwards from the granite contact, with hydrous, high sulfide assemblages. These are volumetrically dominant at Mt. Lindsay and generally contain low tin grades (0-0.2% Sn), almost all of which are acid soluble. This reflects the presence of tin in solid solution with such minerals as amphibole, sphene and ilvaite. Kwak has recognized four assemblages (from the limestone contact inwards):

IIA: Amphibole-pyrrhotite-sphene assemblage. Magnetite may also be stable. Relict cassiterite may occur within the outer limits of this alteration zone (e.g. ML41, No. 2 Horizon).

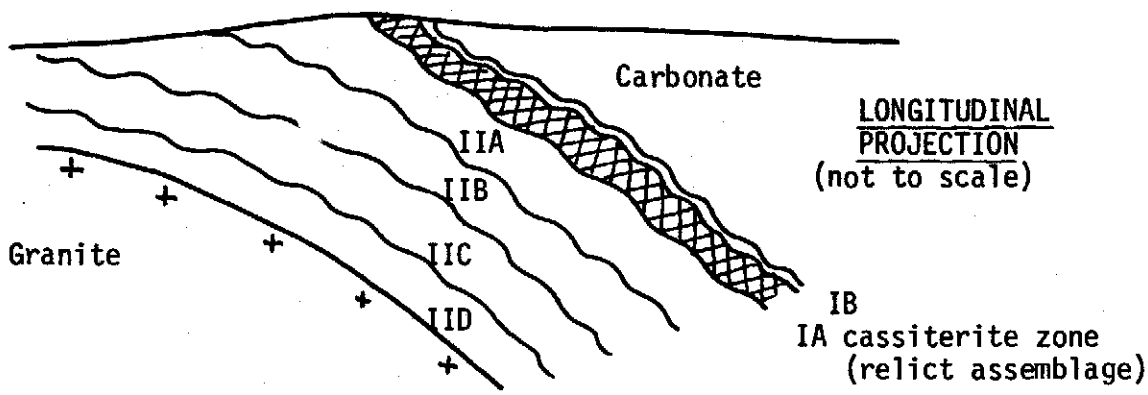
IIB: Ilvaite-amphibole-pyrrhotite asemblage.

IIC: Pyrite-ilvaite-amphibole-pyrrhotite-assemblage.

IID: Annite-fluorite assemblage. This generally occurs close to the granite, overprinting the other stage I and II skarn types; unlike them, it is devoid of tin.

Stage III These fluids produced hydrous and fluorine-bearing assemblages in veins and vug fillings. The Stage III assemblages are volumetrically unimportant.

Kwak's (1982) model is illustrated below:



According to this model, the cassiterite-bearing IA assemblage may occur as:

(1) A curved, pencil shaped body (like a sandstone uranium roll front deposit), or

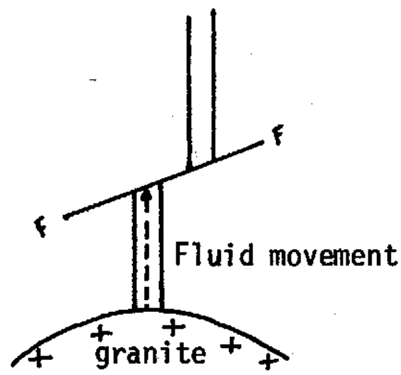
(2) Irregular relict blocks, or

(3) Some intermediate type between (1) and (2) above.

Unfortunately, Kwak's model does not explain the mineralized assemblage in the Mt. Lindsay Mine itself, which appears to be a cassiterite-bearing stage II assemblage. Kwak has suggested that the stage II fluids removed tin from stage I skarns, ultimately re-depositing it in a Cleveland- or Renison-type situation well away from the granitic source. He has also noted the association between high tin grades and low angle faults at Cleveland; the same association exists at Mt. Lindsay and suggests the following mineralization model:

(1) A low angle fault placed carbonate against clastic sediments. Fluids from a granitic source rising up and replacing the carbonate reached a "dead end" i.e.

Section View



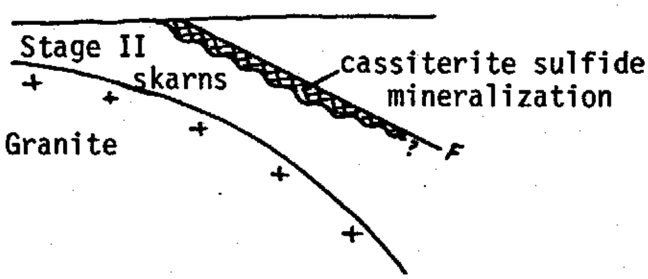
(2) The fault may have been either a physical or chemical trap for tin deposition.

(3) Stage I fluids would have precipitated a IA cassiterite-bearing skarn directly beneath the fault.

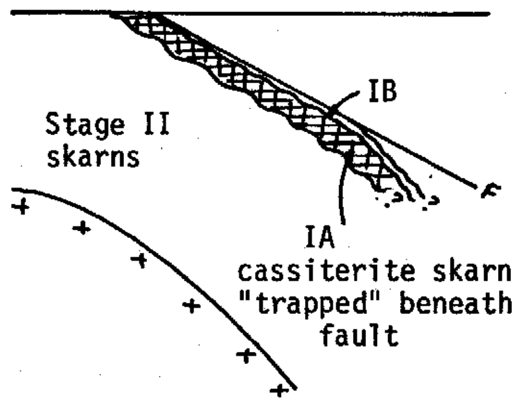
(4) If Stage II fluids reached and replaced the IA cassiterite zone, the silicate assemblage would have changed but the cassiterite would have remained as the fluids would have been saturated with tin.

(5) The difference between the No. 2 Horizon and the Main Ore Zone may therefore reflect the proximity of the ore-localizing fault to the granite source i.e.

Main Ore Zone
Schematic Longitudinal
Projection



No. 2 Horizon
Schematic Longitudinal
Projection

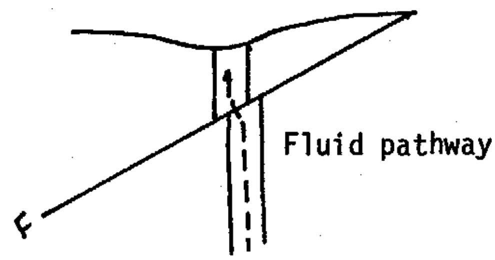


(not to scale)

The exploration implications of this model are clear. In both the Main Ore Zone and the No. 2 Anomaly a pencil-shaped body of mineralization may occur. Examination of the Longitudinal Projections for the two horizons (Figures 7a, b) indicates that potential exists for more than 3 million tonnes of cassiterite-bearing mineralization with an expected average grade greater than 0.7% Sn.

The model also indicates a possible reason for the absence of outcropping cassiterite-bearing skarn in the No. 2 Horizon. At that point, the fault may not separate the carbonate horizons entirely, in which case the "tin trap" may not exist i.e.

Section View



7. CONCLUSIONS AND RECOMMENDATIONS (P. Roberts)

7.1 Parsons Hood

Morrison (Appendix 4) has pointed out that stanniferous skarns may exist further away from the granite than the ML61 intersections. Nevertheless the results from the drilling program were very disappointing and downgraded the area's prospectivity substantially. It is difficult to imagine how the thin skarns intersected in ML61 could have more potential than the Mt. Lindsay skarns.

No further work is recommended on this area unless substantial encouragment is obtained at Mt. Lindsay.

7.2 Mt. Lindsay Mine Area

7.2.1 Drilling (Figures 6, 7, 8)

Two holes are proposed in this area to test the previously described skarn zonation model in both the Main Ore Zone and No. 2 Horizon. The holes could be equally justified to test Kwak's simpler model.

In order to maximize the chances of obtaining a cassiterite-skarn intersection, the proposed holes should be drilled at a shallow angle to dip. In addition, the holes should be drilled relatively close to earlier intersections to avoid the danger of missing the target horizon altogether because of unforeseen fault complications.

Proposed hole details are:

ML63

Collar co-ordinates (RMG) :32050N 10917E
Bearing (RMG) :033°
Dip : -65.5°
Target : Main Ore Zone.
Expected depth : 90m

ML64

Collar co-ordinates (RMG) :31655N, 11432E
Bearing (RMG) :038.5°
Dip : -64.5°
Target : No. 2 Horizon.
Expected depth: 240m

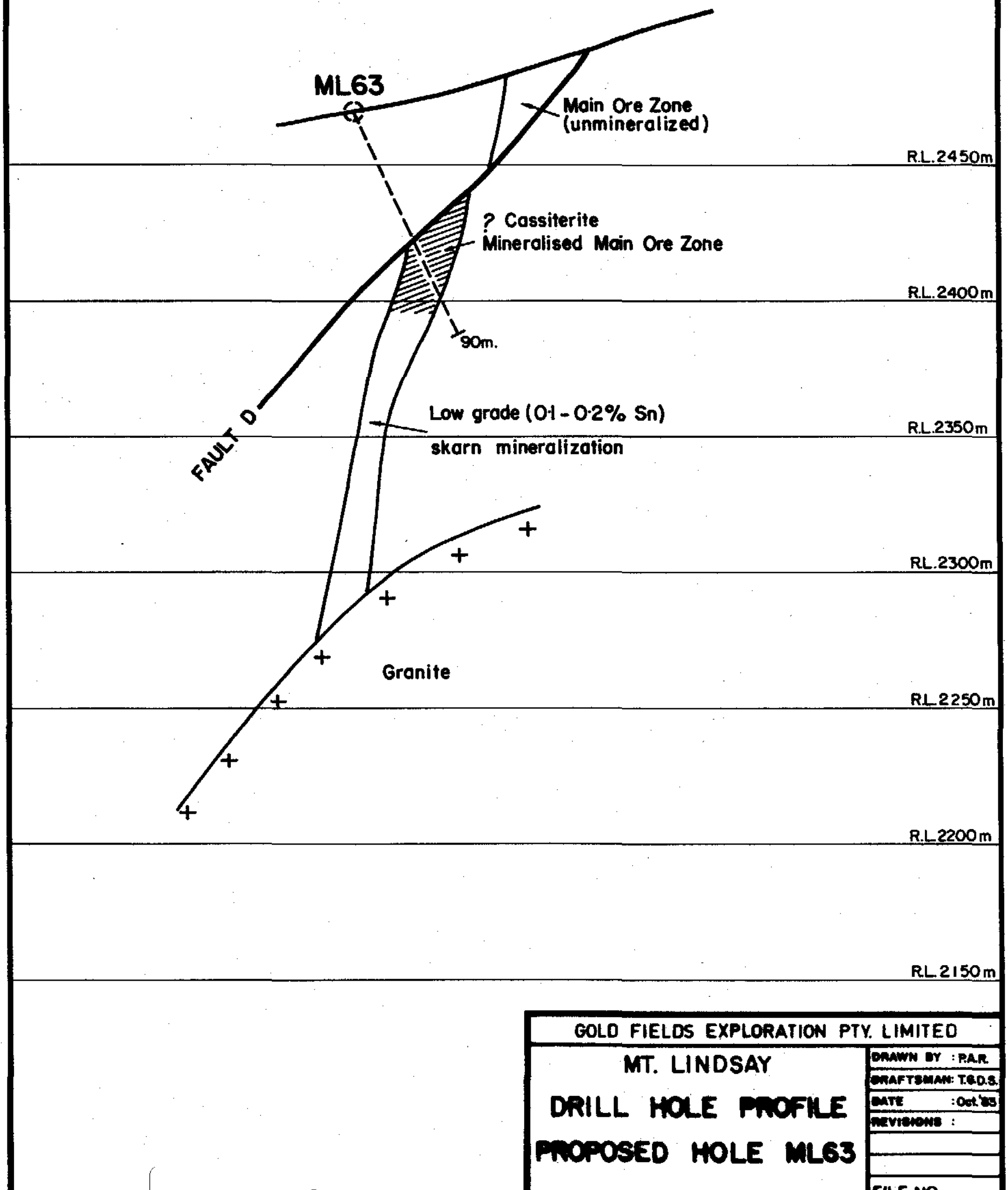
7.2.2 Bedrock Sampling

It is possible that cassiterite-bearing skarn in the No. 2 Horizon outcrops. The early prospectors may have missed such an outcrop, especially if the cassiterite grain size was relatively fine (≤100 μm).

A small bedrock sampling program is recommended at the eastern end of the No. 2 Horizon magnetic/ geochemical anomaly. If the results of ML64 are negative but outcropping cassiterite skarn is discovered, further drilling may well become necessary.

025

506026



GOLD FIELDS EXPLORATION PTY. LIMITED

MT. LINDSAY

DRILL HOLE PROFILE

PROPOSED HOLE ML63

DRAWN BY : P.A.R.
DRAFTSMAN: T.G.D.S.
DATE : Oct.'83
REVISIONS :

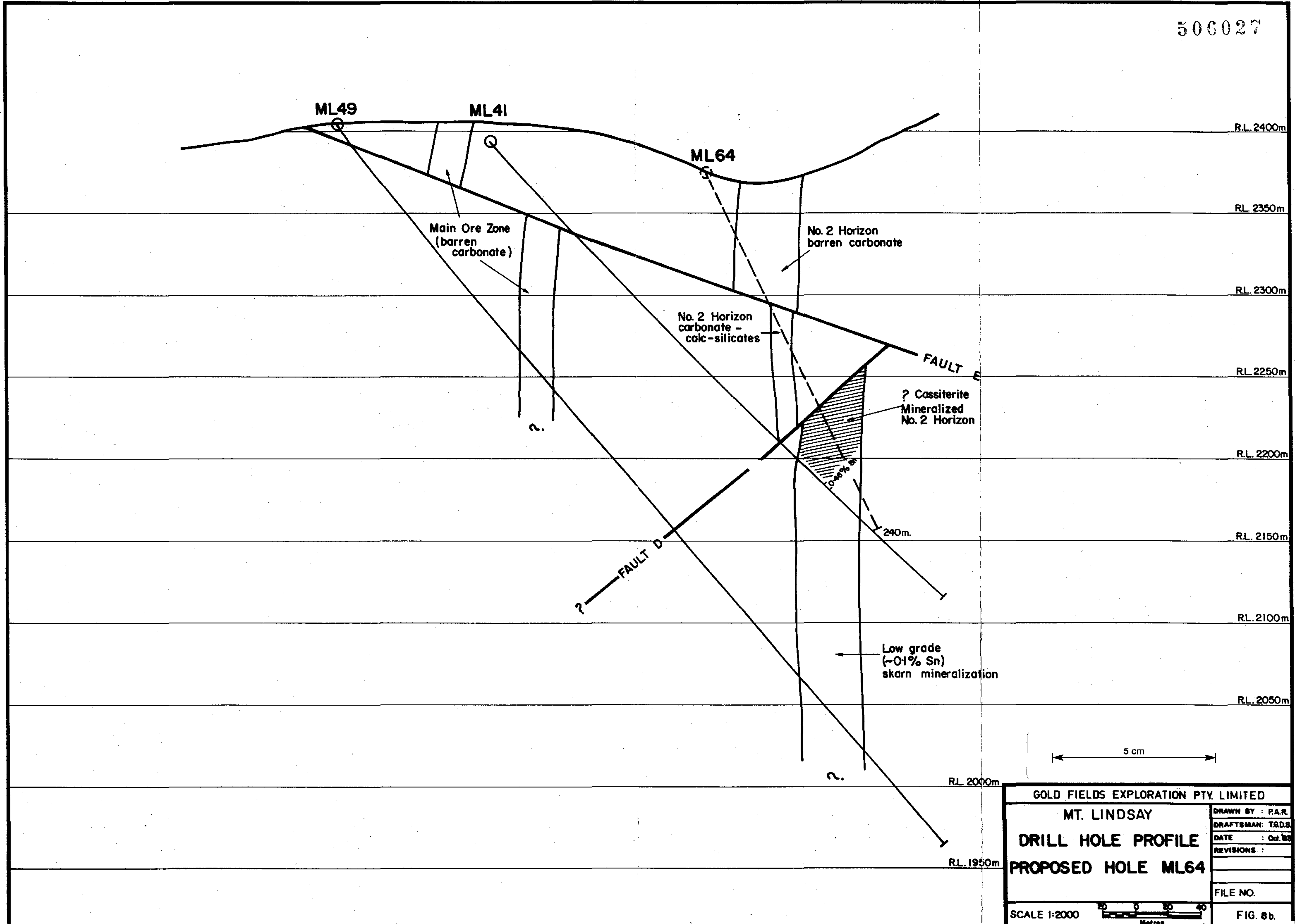
FILE NO.

SCALE 1:2000 (Metres: 20, 0, 20, 40)

FIG. 8a.

026

506027



GOLD FIELDS EXPLORATION PTY. LIMITED	
MT. LINDSAY	DRAWN BY : P.A.R.
DRILL HOLE PROFILE	DRAFTSMAN: T.G.D.S.
PROPOSED HOLE ML64	DATE : Oct. 83
	REVISIONS :
	FILE NO.
SCALE 1:2000 (20 0 20 40 Metres)	FIG. 8b.

The above program is expected to cost $51,300. Budget details are given in Appendix 2.

8. BIBLIOGRAPHY

Anon: Geological Report on Stanley River Area-Mt. Lindsay Prospect - Schedule 68. Unpubl. Rep. A.T.D.P.

Brown A.V., 1980: "Some Aspects of the Geology of the Mt. Lindsay-Dundas Areas, Western Tasmania" Unpubl. Report 1980/42. Tasmanian Dep't Mines.

Cannard,C., 1981: Detection of Carbonate Strata by Soil Geochemistry. Renison Limited Unpubl. Report, June 1981.

Chenhall,B. & Jessup,A., 1968: Petrology of Selected Rocks from Camp 30 - Merton Area. Unpubl. Rep. A.T.D.P. 1967-68.

Couper,J.K., 1965: Interim Report on Mt. Lindsay Prospect. Unpubl. Rep. A.T.D.P. March 1965.

Couper,J.K., 1965: Report 4 - Review of Mt. Lindsay Prospect at completion of Third Diamond Drilling Programme. Unpubl. Rep. A.T.D.P.

Elliston,J., 1954: Stanley River Tin. Unpubl. Rep. Tas. Dep't Mines. 29-4-54.

Glasson,K.R., 1968: Interim Report Mt. Lindsay (Tasmania). Unpubl. Rep. A.T.D.P. January 1968.

Glasson,K.R., 1968: Review of the Summer Exploration Programme Mt. Lindsay E.L. 2/63 - 1967-68. Unpubl. Rep. A.T.D.P. April 1968.

Henderson,Q.J., 1945: Preliminary Report on the Meredith Range District. Unpubl. Rep. Tas. Dept't Mines 23-4-45.

Henderson,Q.J., 1945: Mineral Prospects of the Pieman River Area. Unpubl. Rep. Tas. Dep't Mines. 23-4-45.

Hopwood,T., 1965: Relationship of Stucture to Ore Control in the Mt. Lindsay - Cleveland Prospect Area. Unpubl. Rep. A.T.D.P.

Howland-Rose,A.W.,1974: Final Report on Induced Polarisation Surveys in the Misty Valley Area near Renison Bell, Tasmania, on behalf of Renison Limited. Unpubl. Report March 1974.

Howland-Rose,A.W.,1974: A Report on Electrical Induced Polarisation Surveys at Mt. Lindsay near Renison Bell, West Coast Tasmania, on behalf of Renison Limited. Unpubl. Report May 1974.

Howland-Rose,A.W, 1975: A Report on Additional Electrical Induced Polarisation Surveys at Mt. Lindsay, near Renison Bell, on the West Coast Tasmania, on behalf of Renison Limited. Unpubl. Report March 1975.

Howland-Rose,A.W., 1980: Gradient Array E.I.P. Survey, Harman River Grid. Unpubl. Report June 1980.

Hughes,T.D., 1957: Limestones in Tasmani. Tas. Geol. Surv. Min. Res. No. 10.

Hunting Geology & Geophysics (Aust.) Pty. Ltd. 1979: A Photogeological Study of the Meredith Granite and Surrounding Area, Western Tasmania. Unpubl. Report for Renison Limited June 1979.

Irvine,J.L., 1974: An Interpretation of a Combined Geophysical Survey - Mt. Lindsay Area Tasmania. Unpubl. Report July 1974.

Jessup,A., 1968: Summary Report on Camp 30 Area. Unpubl. Rep. A.T.D.P. Summer 1967-68.

Jessup,A., 1968: Supplementary Report on the Mt. Lindsay Area. Unpubl. Report. A.T.D.P. March 1968.

Jessup,A., 1969: Report on Summer Expl :ation undertaken at Mt. Lindsay. Unpubl. Rep. A.T.D.P. 1968-69.

Jordan,M., 1970: Report on the Summer Exploration Programme undertaken at Mt. Lindsay and in the Stanley Reward Area. Unpubl. Rep. Paringa Mining & Exploration Company Lt. (P.M.E.C.) 1969-70.

Krummei,C.:: E.L. 2/63 End of Project Report - Wilson River Unpubl. Report. Cominco Exploration Pty. Ltd.

Kwak,T.,1982: The geology and geochemistry of the zoned Sn-W-Be-F skarns at Mt. Lindsay, Tasmania, Australia.

Linford,J.G., 1973: Report on Turair, Airborne EM-magnetic Survey, Renison Bell - Mt. Lindsay. Unpubl. Report May 1973.

McIntosh Reid,A.: Osmiridium in Tasmania. Bull. Geol. Surv. Tas. No. 32.

McIntosh Reid,A., 1927: Preliminary Report on Mt. Lindsay Tin Mine Tasmania. Unpubl. Rep. Tas. Dep't Mines 24-5-27.

McIntosh Reid,A.,1927: Mt. Lindsay Mine - Supplementary Report. Unpubl. Report 30-10-27.

Martin,L.A., 1981: E.L. 2/63 Mt. Lindsay Mine Area Annual Report 1980-1981. Renison Limited Unpubl. Report June 1981.

Martin,L.A., 1981: E.L. 18/73 Stanley River Area Annual Report 1980-1981. Renison Limited Unpubl. Report August 1981.

Martin,L. & Roberts,P., 1982: E.L. 2/63 Mt. Lindsay Area. Merton Hill Progress Report. Renison Limited Unpublished Report April 1982.

Martin,L., 1982: E.L. 2/63 Mt. Lindsay Area, Western Tasmania. 1981-82 Annual Report. Renison Limited Unpubl. Rep. July 1982.

Morton,J.L., 1962: Geological Report on the Mt. Lindsay Tin Deposit, Zeehan, Tasmania. Unpubl. Rep. Aberfoyle Tin Development Partnership (A.T.D.P.) 20-3-62.

Morton,J.L., 1962: Study, Estimated Cost and Schedule of Proposed Diamond Drilling Programme of Mt. Lindsay Tin Prospect. Unpubl. Rep. A.T.D.P. 30-11-62.

Morton,J.L., 1963: Progress Report No. 4 on the Mt. Lindsay Tin Prospect. Unpubl. Rep. A.T.D.P. January 1963.

Morton,J.L., 1963: Progress Report No. 7 on the Mt. Lindsay Tin Prospect. Unpubl. Rep. A.T.D.P. 18-4-63.

Morton,J.L., 1963: Review of Mt. Lindsay Prospect at conclusion of first Diamond Drill Programme. Unpubl. Rep. A.T.D.P. 23-4-63.

Morton,J.L, 1963: Report on Access Routes to Mt. Lindsay, Tasmania. Unpubl. Rep. A.T.D.P. August 1963.

Morton,J.L., 1963: Progress Report No. 8 on Mt. Lindsay Tin Prospect. Unpubl. Rep. A.T.D.P. 11-10-63.

Morton,J.L., 1963: 1963-64 Schedule of Diamond Drilling Programme for Mt. Lindsay, Tasmania. Unpubl. Rep. A.T.D.P. 25-10-63.

Morton,J.L., 1963: Progress Report No. 9 on Mt. Lindsay Tin Prospect, Zeehan, Tasmania. Unpubl. Rep. A.T.D.P. December 1963.

506032

Morton, J.L., 1963: Proposed Geological Reconnaissance Programme for 1964, Schedule 68. Mt Lindsay - Stanley Reward Area. Unpubl. Rep. A.T.D.P. December 1963.

Morton, J.L., 1964: Review of Mt. Lindsay Drilling and Reconnaissance Programme. Unpubl. Report. A.T.D.P. 19-3-64

Morton, J.L, & Couper, J.K., 1964: Report 3 - Review of Mt. Lindsay Prospect at completion of Second Diamond Drilling Programme. Unpubl. Rep. A.T.D.P. 29-6-64.

Newnham, L.A., 1975: E.L. 2/63 and E.L. 18/73 Annual Report 1974-75. Renison Limited Unpubl. Rep. August 1975.

Newnham, L.A., 1975: E.L. 2/63 and E.L. 18/73 Diamond Drilling Proposals Summer 1975-76. Renison Limited Unpubl. Report October 1975.

Newnham, L.A., & Schellekens, R.R., 1978: E.L. 2/63 and E.L. 18/73 Mt. Lindsay Area Annual Report 1977-78. Renison Limited Unpubl. Report July 1978.

Newnham, L.A., 1980: E.L. 18/73 Stanley River Area Annual Report 1979-80. Renison Limited Unpubl. Report March 1980.

Poltock Bros., 1980: E.L. 2/63 Mt. Lindsay Area "Parsons Hood: ML5-12 2700-3700N." Unpubl. Report November 1980.

Ransom, D.M. & Wilson, C.J. 1966: Mt. Lindsay-Regional Geology Report 1965-66. Unpubl. Rep. A.T.D.P.

Roetz, Cameron & Allen, 1969: Geology of the Wilson River Area. Unpubl. Report P.M.E.C.

Ross, A.F., 1976: E.L. 2/63 and E.L. 18/73 Mt. Lindsay Area Annual Report 1975-76. Renison Limited Unpubl. Report May 1976.

Ross, A.F., 1977: E.L. 2/63 and E.L. 18/73 Mt. Lindsay Area Annual Report 1976-77. Renison Limited Unpubl. Report. May 1977.

Ross, A.F. & Schellekens, R.R., 1980: "Mt. Lindsay Sn Prospect, Dundas Trough, Tasmania". Journal of Geochemical Exploration. Vo. 12. No. 2/3 May 1980.

Ross, A.F., 1980: E.L. 2/63 Mt. Lindsay Area Annual Report 1979-80. Renison Limited Unpubl. Report November 1980.

03

Shellekens,R., 1972: Literature Survey on E.L. 2/63. Unpubl. Rep. Renison Ltd.November 1972.

Shellekens,R. & Newnham,L.A.1973:E.L. 2/63 Mt. Lindsay Area- Annual Report 1972-73. Renison Ltd Unpubl. Report.

Shellekens,R.R. & Newnham,L.A., 1974: E.L. 2/63 and E.L. 18/73 Mt. Lindsay Area, Western Tasmania, Annual Report 1973-74. Renison Limited Unpubl. Report August 1974.

Shellekens,R.R., 1979: Annual Report 1978-79, Mt. Lindsay (E.L. 2/63) and Stanley River (E.L. 18/73) Areas. Renison Limited Unpubl. Report. August 1979.

Scott,J.B., 1929: Mt. Lindsay Mine - Stanley River District - West Coast. Unpubl. Rep. Tas. Dep't Mines 31-10-29.

Taylor,B.L., 1954: Progress Report on the North Pieman Mineral Area. Unpubl. Rep. Tas. Dep't Mines 5-11-54.

Tester,D.K., 1970: Summary of Exploration Activities undertaken by the Aberfoyle Group from 1962-1970. Unpubl. Report September 1970.

Waterhouse, L.L.: Stanley River Tin Field. Bull. Geol. Surv. Tas. No. 15.

Whitham,C, 1949: Western Tasmania. Published by Davies Brothers. P. 123.

Wilson,C.J.: Supplement to Mt. Lindsay Regional Geology Report. Unpubl. Rep. A.T.D.P.

Worth,I.R., 1964: Report on Work completed for Stanley Reward Geologists Reconnaissance Programme for 1964 Schedule 68. Unpubl. Rep. A.T.D.P. 1-5-64.

Zarauatjian,A., 1965: Interpretation Report of Airborne Magnetometer Survey over Waratah-Zeehan Areas, for Aberfoyle Tin Development Partnership. Unpubl. Report August 1965.

APPENDIX 1

Expenditure 1982-83

MT.LINDSAY, E.L. 2/63

EXPENDITURE 1982/83

	$
GEOLOGY	
-Salaries	12,969
Salary on-costs	1,067
Transport	4,032
Miscellaneous	69
Outside contractors	2,647
Travel	535
Stores	840
	22,159
GEOPHYSICS	
-Miscellaneous	55
Outside contractors	650
	705
GEOCHEMISTRY	
-Assays	530
Outside contractors	248
	778
DRILLING	
-Transport	11,810
Outside contractors	18,255
Stores	1,375
	31,440
LAND ACQUISITION	
-Miscellaneous	1,175
SITE PREPARATION	
-Outside contractors	6,497
SURVEYING	
-Outside contractors	565
INDIRECT MOTOR VEHICLE EXPENSES	1,085
TOTAL RGC PROJECT COSTS	64,404
LESS: Recovery costs	(1,924)
	62,480

APPENDIX 2

Budget 1983-84

MT.LINDSAY, E.L. 2/63.

BUDGET 1983/84

	$
GEOLOGY	
-Salaries	9,450
Salary on-costs	1,823
Outside Contractors	3,000
Travel	1,700
Stores	400
	16,373
GEOCHEMISTRY	
-Assays	1,700
Outside Contractors	2,000
	3,700
DRILLING	
-Assays	1,800
Outside Contractors	19,250
Stores	1,000
	22,050
LAND ACQUISITION	
-Miscellaneous (including legal fees)	6,000
SITE PREPARATION	
-Outside Contractors	840
SURVEYING	
-Outside Contractors	1,000
INDIRECT MOTOR VEHICLE EXPENSES	1,300
	51,263

506038

APPENDIX 3

Diamond Drill Logs - Parsons Hood Area

038

506039

HOLE NO. :	ML 61
STATE :	Tasmania

GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE RECORD

ULV. PRESS

PROJECT	Mt. Lindsay
DESIGNED BY	P.A. Roberts
LOGGED BY	A.J. Cartwright
COMMENCED	12-1-83
COMPLETED	20-1-83

PURPOSE

To test for the possible existence of skarn mineralisation as indicated by magnetic anomalies on Parson's Hood.

LOG SUMMARY / GENERAL COMMENTS

Two non-stanniferous skarn zones were intersected within a sequence of variably altered, hornfelsed sediments. No significant enrichments in trace metals were recorded.

ASSAY SUMMARY

INTERVAL From	INTERVAL To		Sn	WO_3	Cu	Pb	Zn	As	Sol.Sn	Bi	Ag			COMMENTS
4.0	19.0		0.01	<0.01	<0.01	<0.01	0.01	<0.1	<0.01	0.004	2			All values are wt %, except Ag which is ppm.
25.0	32.0		<0.01	<0.01	<0.01	<0.01	0.01	<0.1	<0.01	0.003	2			
36.0	45.0		<0.01	<0.01	0.01	<0.01	<0.01	<0.1	<0.01	0.003	2			
61.0	79.0		<0.01	<0.01	<0.01	<0.01	0.01	<0.1	<0.01	0.005	2			
91.0	107.0		0.03	<0.01	<0.01	<0.01	0.01	<0.1	0.01	0.006	2			

LOCATION

NORTHING	5383796
EASTING	361294
R.L.	903.2
GRID	A.M.G.
LENGTH	150.3

HOLE CONDITION

SIZE

Hole Size	Depth
HQ	0-2.2
NQ	2.2-21.0
BQ	21.0-150.3

SIGNIFICANT CORE LOSS INTERVALS

From	To	% Lost

POOR GROUND CONDITION ZONES

From	To	Condition

HOLE CONDITIONS AFTER COMPLETION

Hole open. Black polythene left in the top 12m. of the hole.

SURVEY DATA (Note: Bearing type must be same as Project Grid Type)

SURVEY Depth	SURVEY Bearing	SURVEY Dip	INTERVAL From	INTERVAL To	INTERVAL Distance	VERTICAL D.Sin.Dip	VERTICAL R.L.	HORIZONTAL D.Cos.Dip	HORIZONTAL Prog.Total
0.0	266	50.0	0.0	14.5	14.5	11.1	892.1	9.3	9.3
29.0	*	49.0		44.5	30.0	22.6	869.5	19.7	29.0
60.0	*	49.0		74.5	30.0	22.6	846.9	19.7	48.7
90.0	*	48.5		104.5	30.0	22.5	824.4	19.9	68.6
120.0	*	48.0		134.5	30.0	22.3	802.1	20.1	88.7
150.0	*	48.0		150.0	15.5	11.6	790.5	10.4	99.1

*irregular readings due to high magnetic susceptibility of rock.

035

506040

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 61

Page: 1.

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %
				SUMMARISED LOG				
0	3.8	3.8		INCIPIENTLY ALTERED, HORNFELSED, FINE GRAINED SANDSTONE AND SILTSTONE.				
3.8	17.7	13.9		SKARN ZONE. STRONGLY ALTERED CALCAREOUS SANDSTONE WITH LENSES OF WEAK ALTERED FINE GRAINED SANDSTONE.				
17.7	36.0	18.3		HORNFELSED SANDSTONE, INCIPIENTLY ALTERED WITH BANDS OF MODERATELY ALTERED CHERT AND UNALTERED SILTSTONE.				
36.0	42.6	6.6		DARK FINE GRAINED SILTSTONE WITH THIN HORIZONS OF CHERT AND HORNFELSED SANDSTONE. WEAKLY ALTERED.				
42.6	59.5	16.9		WEAKLY ALTERED, MEDIUM GRAINED, HORNFELSED SANDSTONE, WITH THIN BEDS OF SILTSTONE AND CHERT.				
59.5	76.8	17.3		MODERATELY ALTERED, CHERT RICH, HORNFELSED SANDSTONE, POSSIBLY ALSO CALCAREOUS.				
76.8	93.6	16.8		MEDIUM TO COARSE GRAINED, INCIPIENTLY ALTERED, HORNFELSED SANDSTONE, WITH HORIZONS OF FINER GRAINED SEDIMENTS.				
93.6	101.5	7.9		SKARN ZONE. STRONGLY ALTERED AND REPLACED CALCAREOUS SANDSTONES.				
101.5	135.8	34.3		HORNFELSED COARSE AND FINE GRAINED SANDSTONE WITH NUMEROUS CHERTY BANDS. INCIPIENTLY ALTERED.				
135.8	150.3	14.5		INCIPIENTLY AND UNALTERED DARK SILTSTONE AND CHERT.				

506041

GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE LOG AND ASSAY DATA

LV. PRESS

PROJECT: Mt. Lindsay

HOLE NUMBER: ML 61

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	Sn	WO_3	Cu	Pb	Zn	As	Ag	Bi	Sol.Sn
				ASSAY DATA (all wt.-% except Ag-ppm)													
				DETAILED LOG													
				0-3.8 HORNFELSED SANDSTONE AND SILTSTONE.													
0	2.2			Not cored.													
2.2	3.3	1.1	100	Dark blue-brown fine grained sandstone with irregular pods of finer grained sediment. Minor, weak actinolitic alteration (green) and development of sulphide (po-py) veinlets along planes of weakness and as patchy disseminations.													
3.3	3.8	0.5	100	Siltstone with irregular laminae of sandstone. Hornfelsed and altered to pink (garnet?) and green (actinolite) colours with quartz-pyrite-pyrrhotite veins.													
				3.8-17.7 SKARN. STRONGLY ALTERED CALCAREOUS SANDSTONE.													
3.8	4.6	0.8	100	Pale coloured carbonate-rich sediments replaced by pale green actinolite, calcite, quartz and sulphides. Minor layers of fine grained darker sediments and coarser grained sand rich sediments exist. Several phases of veining and fracturing can be seen; some veining appears to be syn-sedimentary and some deformation appears to be soft-sediment. Weakly altered cherts (white) also occur.													
4.6	7.2	2.6	100	Purple (garnet) alteration in very irregularly bedded siltstone and green (actinolitic) altered sandstone. Rare quartz veins and veins of gossanised/limonitised sulphides. Pyrite and pyrrhotite occur in veins and as disseminations.													
7.2	8.2	1.0	100	Sandstone rich beds with green actinolite alteration. Sulphides are abundant as clots and disseminated grains, few veins other than minor, actinolite-sulphide-carbonate veins are present.													
8.2	12.1	3.9	100	A 10 cm zone of purple-green altered sandstones and siltstones,		4.0	5.0	100	.01	< .01	< .01	< .01	.01	< .1	2	0.003	<.01

041

506042

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 61 **Page:** 3.

INTERVAL		RECOVERY		DESCRIPTION	ASSAY DATA (all wt.-% except Ag-ppm)												
From	To	m	%		Sample No.	From	To	Rec. %	Sn	WO_3	Cu	Pb	Zn	As	Ag	Bi	Sol.Sn
				grading into a pervasively altered, totally replaced sequence.		5.0	6.0	100	.01	<.01	<.01	<.01	<.01	<.1	2	0.003	< .01
				Abundant sulphides carbonates and actinolite with calcite veins			7.0		<.01	<.01	.01	<.01	.02	<.1	2	0.003	< .01
				are the predominant minerals. At 8.6m, at 45°/ CA, *a different*			8.0		<.01	<.01	.01	<.01	.01	<.1	1	0.002	< .01
				style of alteration; very pale pink garnet-calcite alteration			9.0		.02	<.01	.01	<.01	.01	<.1	2	0.019	0.02
				with numerous calcite veinlets and much less sulphide content.			10.0		<.01	<.01	<.01	<.01	.03	<.1	3	0.005	< .01
				Within this zone are 5-10cm bands of gossanised sulphide and			11.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.006	< .01
				magnetite.			12.0		<.01	<.01	<.01	<.01	.01	<.1	3	0.004	< .01
							13.0		<.01	<.01	.01	<.01	.01	<.1	2	0.002	< .01
12.1	13.0	0.9	100	Very weakly altered sandstone, medium grained. A few veins of			14.0		<.01	.01	<.01	<.01	.01	<.1	3	0.005	< .01
				quartz-pyrite-pyrrhotite-calcite-actinolite exist.			15.0		<.01	<.01	<.01	<.01	.01	<.1	3	0.005	< .01
							16.0		.02	<.01	.01	<.01	.01	<.1	3	0.005	.01
13.0	17.7	4.7	100	*Incipiently banded green*-pink altered sediments, at 45°/ CA.			17.0		.02	<.01	<.01	<.01	.01	<.1	2	0.004	.01
				Strongly altered. At 15.5m a vuggy gossan, approx. 10cm thick,			18.0		.02	<.01	<.01	<.01	.01	<.1	2	0.005	< .01
				of sulphides and magnetite. Underlain by bands at 45° CA, of pink			19.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.002	< .01
				(garnet)-calcite and dark green (actinolite) *-sulphide, around*													
				1-2cm thick. At 16.5m, paler, less sulphide rich layers.													
				17.7-36.0 INCIPIENTLY ALTERED HORNFELSED SANDSTONE													
17.7	27.6	9.9	100	Blue grey sandstone with pale cherty (*siliceous sediments*) bands.													
				All *hornfelsed*. Few veinlets of sulphides and carbonates,													
				otherwise unaltered. Patches of darker, finer grained sandstone													
				with increased pyrrhotite veining.													
27.6	29.7	2.1	100	Pale pink moderately altered chert rich rock. Strongly altered													
				patches of calcite, actinolite and sulphide. Minor brecciation													
				due to fracturing with very small offsets. At 28.3, very													
				irregular bedding of pink and white chert layers.		25.0	26.0	100	<.01	<.01	<.01	<.01	.01	<.1	2	0.003	<.01
							27.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.002	<.01
29.7	30.6	0.9	100	Weakly hornfelsed sandstone with thin white chert layers.			28.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.004	<.01
				Sulphide veins are common. Bedding is very irregular.			29.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.004	<.01
							30.0		<.01	<.01	.01	<.01	.01	<.1	1	0.002	<.01
30.6	34.4	3.8	100	*Dark black very fine grained siltstone with lenses of brown-*			31.0		<.01	<.01	.01	<.01	<.01	<.1	2	0.003	<.01
				purple sandstone. Weakly fractured. Veinlets of sulphide and			32.0		<.01	<.01	<.01	<.01	<.01	<.1	2	0.005	<.01
				quartz with very thin cherty horizons. Very fine, thin lenses													

042

506043

GOLD FIELDS EXPLORATION PTY. LIMITED

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 61 Page: 4.

INTERVAL		RECOVERY		DESCRIPTION	ASSAY DATA (all wt. % except Ag-ppm)												
From	To	m	%		Sample No.	From	To	Rec. %	Sn	WO_3	Cu	Pb	Zn	As	Ag	Bi	Sol.Sn
				(1cm long) of sulphide, parallel to bedding (primary sulphides?)													
				Cross-cut and offset by other veinlets of sulphide (pyrite and													
				pyrrhotite).													
34.4	36.0	1.6	100	Laminar bedded cherty hornfelsed sandstone. Numerous sulphide													
				veins and veinlets showing offsets and cross-cutting relation-													
				ships. Very weak alteration with rare pale pink (garnet) and													
				calcite veinlets.													
				36.0 - 42.6 WEAKLY ALTERED, HORNFELSED SILTSTONE.													
						36.0	37.0	100	<.01	<.01	<.01	<.01	<.01	<.1	2	0.004	<.01
36.0	42.6	6.6	100	Very fine grained dark siltstone with thin coarser grained			38.0		<.01	<.01	<.01	<.01	.01	<.1	1	0.004	<.01
				sandstone lenses and very thin chert (white) horizons. Narrow			39.0		<.01	<.01	<.01	<.01	<.01	<.1	2	0.003	<.01
				veins and veinlets of calcite and sulphide exhibit complex			40.0		<.01	<.01	<.01	<.01	<.01	<.1	2	0.002	<.01
				relationships, including brecciation, parallel to bedding, and			41.0		.01	<.01	.13	.01	.01	<.1	1	0.003	.01
				later jointing/faulting also cuts and offsets these veins. Thick			42.0		<.01	<.01	<.01	<.01	<.01	<.1	2	0.004	<.01
				(relatively) lenses of primary sulphides are developed in the			43.0		.02	<.01	<.01	<.01	<.01	<.1	2	0.003	<.01
				finer grained sediments (siltstones) and display pinch and swell			44.0		<.01	<.01	<.01	.01	.01	<.1	2	0.003	<.01
				structures that are parallel to bedding and non continuous i.e.			45.0		<.01	<.01	<.01	<.01	<.01	<.1	2	0.002	<.01
				en-echelon veins.													
				42.6 - 59.5 WEAKLY ALTERED, HORNFELSED SANDSTONE.													
42.6	59.5	16.9	100	Weak to unaltered, pale coloured, coarse grained sandstone, with													
				white chert and siltstone lenses. Sulphides occur-commonly													
				as irregular veins and disseminations. In cherts, weak pink													
				(garnet) alteration with numerous, thin calcite veinlets and													
				patches of massive pods (1cm thick, irregularly shaped) of													
				sulphides. Very thin sulphide vein or stratiform bands (2mm) are													
				common in the fine grained sediments. Minor actinolitic alterat-													
				ion also occurs in the sandstones, producing an irregular													
				patchy style of alteration. At 43.5, a 15cm zone of stronger													
				alteration, sulphide rich and fractured.													

506044

043

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 61 Page: 5.

ASSAY DATA (all wt. % except Ag-ppm)

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No	From	To	Rec. %	Sn	WO_3	Cu	Pb	Zn	As	Ag	Bi	Sol.Sn
				59.5 - 76.8 HORNFELSED SANDSTONE, IN PLACES CALCAREOUS AND													
				CHERT RICH. MODERATELY ALTERED.													
59.5	62.0	2.5	100	A cherty grey sandstone, laminated. Weakly altered overall, with													
				slight increases in alteration at 60.0 (for 15cm) and 61.0 (also													
				15cm). At 60.15, a 2cm thick pyrrhotite with minor chalcopyrite													
				and magnetite vein, at 70° CA.													
						61.0	62.0	100	<.01	<.01	<.01	<.01	<.01	<.1	4	0.007	.01
62.0	73.3	11.3	100	Carbonate rich sediments, moderately and strongly altered.			63.0		.01	<.01	<.01	<.01	.01	<.1	4	0.007	.01
				Strong pink-grey alteration, with sulphide and calcite veining			64.0		<.01	<.01	<.01	<.01	<.01	<.1	3	0.005	<.01
				over a mosaic,blotchy replacement (coarse grained, 3-4mm) texture.			65.0		<.01	<.01	<.01	<.01	<.01	<.1	3	0.005	<.01
				This style of alteration persists to 73.3. Large, thick (3-4 cm).			66.0		<.01	<.01	<.01	<.01	<.01	<.1	2	0.005	<.01
				monomineralic calcite veins at 45-75°/ CA occur at 67.7 and 68.6.			67.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.005	<.01
				Alteration is strong pink grey-green, banded.			68.0		<.01	<.01	<.01	<.01	<.01	<.1	3	0.006	<.01
							69.0		<.01	<.01	<.01	<.01	<.01	<.1	3	0.005	<.01
73.3	76.8	3.5	100	Banded alteration as above with strongly altered calcite rich			70.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.004	<.01
				patches. Sulphides are disseminated in the stronger altered			71.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.003	<.01
				zones and veined in the weaker.			72.0		<.01	<.01	.01	<.01	.01	<.1	2	0.003	<.01
							73.0		<.01	<.01	.01	<.01	.01	<.1	1	0.004	<.01
							74.0		<.01	<.01	.01	<.01	.01	<.1	2	0.004	<.01
				76.8 - 93.6 INCIPIENTLY ALTERED, HORNFELSED SANDSTONE.			75.0		.01	<.01	<.01	<.01	.03	<.1	2	0.004	<.01
							76.0		.01	<.01	.02	<.01	<.01	<.1	1	0.004	<.01
76.8	82.8	6.0	100	Grey, medium grained sandstone, unaltered other than a few zones			77.0		.01	<.01	.01	.01	.02	<.1	1	0.004	<.01
				of actinolite-garnet-calcite-sulphide (po + py) around 10cm thick			78.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.003	<.01
				Fine grained sandstone lenses and cherty horizons with cross-			79.0		<.01	<.01	<.01	<.01	.01	<.1	1	0.004	<.01
				cutting sulphide veins also occur.													
82.8	86.5	3.7	100	Alternating pink and grey, weakly altered sandstones; medium													
				grained with fine silica horizons and patches of coarse sandstone.													
				Minor actinolitic alteration and veining. A few large sulphide													
				pods are developed.													
86.5	93.6	7.1	100	Grey-brown coarse grained sandstone, alternating with a darker													
				grey finer grained sandstone, with numerous silicic horizons.													
				Unaltered and rarely veined. Sulphides are uncommon.													

500045

GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE LOG AND ASSAY DATA

ULV. PRESS

PROJECT: Mt. Lindsay

HOLE NUMBER: ML 61

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	Sn	WO_3	Cu	Pb	Zn	As	Aq	Bi	Sol.Sn
				ASSAY DATA (all wt. % except Aq-ppm)													
				93.6 - 101.5 SKARN OF STRONGLY ALTERED CALCAREOUS SANDSTONE		93.0	94.0	100	<.01	<.01	.04	<.01	.01	<.1	2	0.003	<0.01
							95.0		.02	<.01	<.01	<.01	.01	<.1	2	0.005	0.01
93.6	99.9	6.3	100	A strongly altered pervasive mosaic of calcite, actinolite,pink			96.0		.05	<.01	<.01	<.01	.01	<.1	2	0.007	0.01
				garnet,disseminated pyrrhotite and pyrite with accesory magnetite,			97.0		.04	<.01	<.01	<.01	.01	<.1	2	0.008	0.01
				replacing a carbonate rich sediment, destroying the original			98.0		.04	<.01	<.01	<.01	.01	<.1	3	0.009	0.01
				textures. Calcite also occurs as veins and the overall colour			99.0		.04	<.01	<.01	<.01	.01	<.1	2	0.008	0.01
				is green due to the predominance of actinolite. Between 98.0 and			100.0		.05	<.01	<.01	<.01	<.01	<.1	2	0.008	0.02
				99.0, occurs an increase in sulphides (pyrrhotite) as massive			101.0		.03	<.01	<.01	<.01	.01	<.1	2	0.008	0.02
				patches.			102.0		.02	<.01	<.01	<.01	.01	<.1	2	0.007	0.02
							103.0		.01	<.01	<.01	<.01	.02	<.1	1	0.003	0.01
99.9	101.5	1.6	100	A moderately and strongly altered zone with few fractures. Second			104.0		.01	<.01	<.01	<.01	.02	<.1	2	0.005	<0.01
				-ary minerals include pink garnet, calcite, with much much less			105.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.003	<0.01
				sulphide than above, and no actinolite. Original sediment was			106.0		.01	<.01	<.01	<.01	.01	<.1	2	0.004	<0.01
				sandy,coarse and fine grained with cherty horizons.			107.0		<.01	<.01	<.01	<.01	.01	<.1	2	0.004	<0.01
				101.5 - 135.8 HORNFELSED SANDSTONE, WEAKLY ALTERED.													
101.5	114.7	13.2	100	Chert rich sandstone, fine grained; the chert beds occuring as highly irregular intergrowths. Alteration is characterised by veins and veinlets of quartz-sulphide and calcite.													
114.7	130.4	15.7	100	Coarse grained sandstone, hornfelsed with thick (10-30cm) beds of chert. Minor pink garnet alteration in pervasive zones with sulphide veins. Beds of very coarse grained sandstone, purple-brown in colour also exist. Bedding is very irregular with the coarser units occuring as lenses. The chert beds are fractured (soft-sediment?) with sandstone infillings. At 130.2m a few large actinolite?/tourmaline? veins, 10°CA 1-2mm thick, with minor sulphide - quartz - carbonate are surrounded by a thin zone of carbonate-actinolitic alteration.													
130.4	135.8	5.4	100	Medium-coarse grained sandstone with a brown and pink colouration due to alteration (weak). Minor quartz veining (probably assoc-iated with hornfelsing) and fracturing occurs. Rare sulphides-													

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 61

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %
				-usually in vein form, and rare actinolitic altered bands.				
				Veinlets of actinolite?/tourmaline? as above, are found at 135.5.				
				Alteration declines with depth to produce unaltered sandstone.				
				135.8 - 150.3 UNALTERED SILTSTONE AND CHERT.				
135.8	150.3	14.5	100	Dark fine grained siltstone with chert lenses; the latter being more altered than the former (secondary minerals are actinolite, garnet, sulphides and carbonates). A few large beds of unaltered, coarse grained sandstone, grey with rare sulphide veins, also occur. The siltstone has syn-sedimentary sulphides (disseminated) and patches of secondary sulphides (some rare chalcopyrite). After 144.0, quartz veining increases and some chert units are brecciated (not strongly). Sulphides are rare, mostly pyrrhotite with rare chalcopyrite. Overall weak to unaltered.				
				END OF HOLE 150.3				
				SAMPLES TAKEN FOR PETROGRAPHY AT:-				
				4.0-4.4, 10.0, 15.0, 28.0, 36.5, 41.0, 41.9, 53.5-54.2, 67.7, 79.6-80.3, 98.0, 98.3,99.1,100.2, 100.7, 101.3, 119.3-119.6, 136.3-136.8.				

U46

506047

GOLD FIELDS EXPLORATION PTY. LIMITED
DRILL CORE RECORD

HOLE NO. :	ML 62
STATE :	TASMANIA

PROJECT	Mt. Lindsay
DESIGNED BY	P.A. Roberts
LOGGED BY	A.J. Cartwright
COMMENCED	21-1-83
COMPLETED	1-2-83

PURPOSE

To test for the possible existence of skarn mineralisation as indicated by IP anomalies on Parsons Hood.

LOG SUMMARY / GENERAL COMMENTS

Hornfelsed sediments from The Crimson Creek Group were intersected. No appreciable skarn zones or areas of intense alteration were found.

SSAY SUMMARY

INTERVAL From	INTERVAL To		Sn	As	WO3	Cu	Pb	Zn						COMMENTS
128.0	129.0		100	30	10	110	30	30						All values are in ppm.

OCATION

NORTHING	5385236
EASTING	361356
R.L.	541.3
GRID	A.M.G.
LENGTH	216.0

HOLE CONDITION

SIZE

Hole Size	Depth
HQ	0.0-1.5
NQ	1.5-15.0
BQ	15.0-216.0

SIGNIFICANT CORE LOSS INTERVALS

From	To	% Lost

POOR GROUND CONDITION ZONES

From	To	Condition

HOLE CONDITIONS AFTER COMPLETION

Hole open. Approximately 12m of black polythene left in the top of the hole.

SURVEY DATA (Note: Bearing type must be same as Project Grid Type)

SURVEY Depth	SURVEY Bearing	SURVEY Dip	INTERVAL From	INTERVAL To	INTERVAL Distance	VERTICAL D.Sin.Dip	VERTICAL R.L.	HORIZONTAL D.Cos.Dip	HORIZONTAL Prog.Total
0.0	254	40.0	0.0	17.0	17.0	10.9	530.4	13.0	13.0
34.0	*	39.5	17.0	49.0	32.0	20.4	510.0	24.7	37.7
64.0	*	39.5	49.0	79.0	30.0	19.1	490.9	23.1	60.8
94.0	*	39.5	79.0	115.0	36.0	22.9	468.0	27.8	88.6
136.0	*	38.2	115.0	145.0	30.0	18.6	449.4	23.6	112.2
154.0	*	37.5	145.0	169.0	24.0	14.6	434.8	19.0	131.2
184.0	*	37.5	169.0	199.0	30.0	18.3	416.5	23.8	155.0
214.0	*	38.0	199.0	214.0	15.0	9.2	407.3	11.8	166.8

* Irregular readings due to high magnetic susceptibility of rock.

041

HOLE NO. **ML 62**

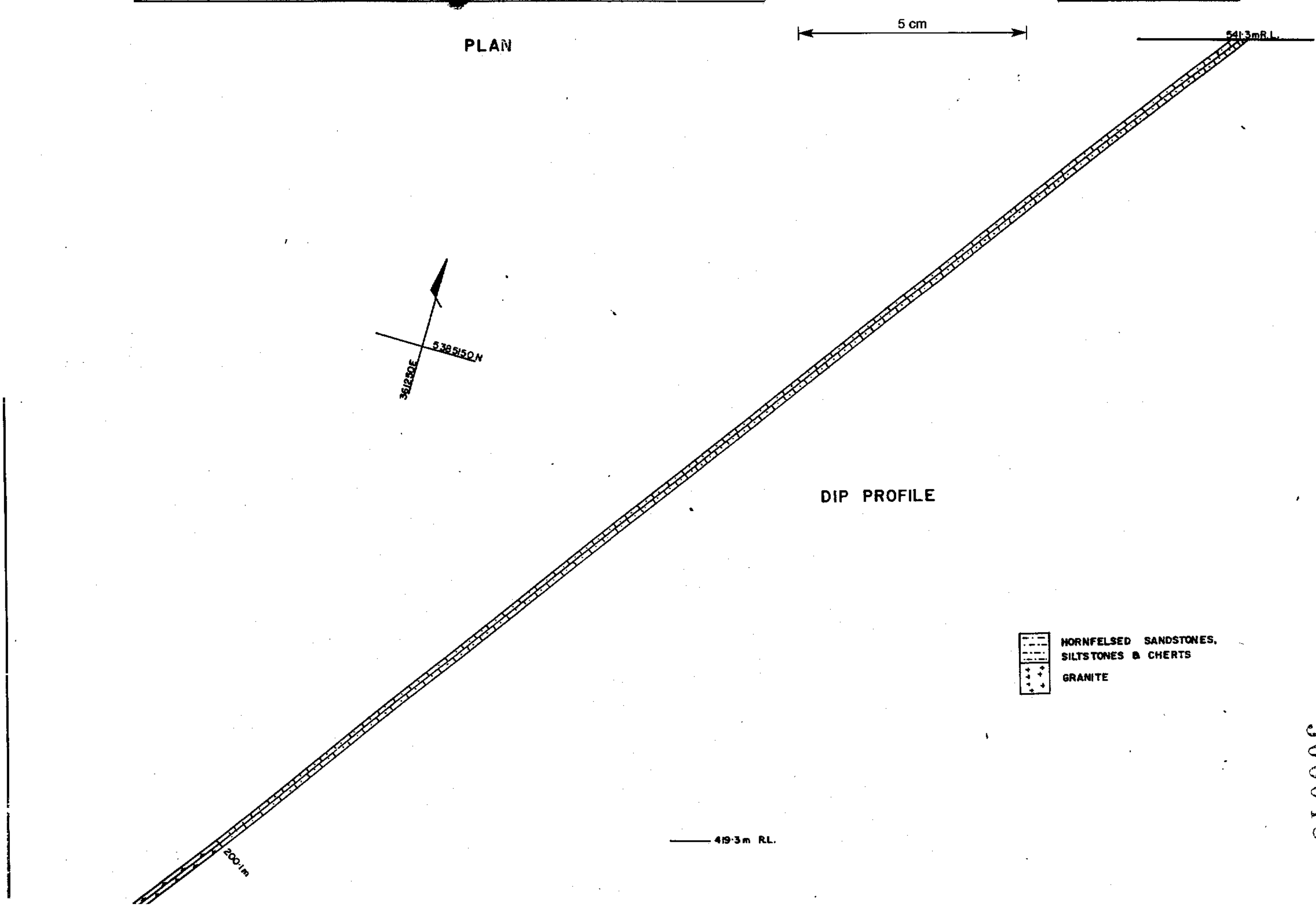
GOLD FIELDS EXPLORATION PTY. LIMITED

DIAMOND DRILL HOLE PLOT

SCALE 1:500 METRES

5385189 N 361193 E

5385236 N 361356 E



506048

048

506049

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 62

Page: 1.

INTERVAL		RECOVERY		DESCRIPTION	ASSAY DATA												
From	To	m	%		Sample No.	From	To	Rec. %									
				SUMMARY LOG													
0	17.6	17.6		HORNFELSED SANDSTONE WITH MINOR CHERTS AND SILTSTONES INCIPIENT-LY ALTERED.													
17.6	27.7	10.1		BANDED CHERTS AND SILTSTONES. WEAKLY ALTERED.													
27.7	80.7	53.0		COARSE AND FINE GRAINED, HORNFELSED SANDSTONE, WITH THIN CHERT BEDS AND RARE CALCAREOUS SANDSTONES WHICH ARE STRONGLY ALTERED. OVERALL WEAKLY ALTERED.													
80.7	90.3	9.6		CHERT WITH SEVERAL CALCAREOUS SANDSTONE BEDS. MODERATELY ALTERED.													
90.3	133.1	42.8		SILTSTONE WITH MINOR INTERBEDDED CHERTS AND SANDSTONES WEAKLY ALTERED.													
133.1	142.2	9.1		HORNFELSED SANDSTONE, VARIABLE GRAINSIZE. UNALTERED.													
142.2	173.9	31.7		INTERBEDDED CHERT AND SILTSTONE WITH MINOR SANDSTONE LENSES. WEAKLY ALTERED.													
173.9	200.1	26.2		STRONGLY HORNFELSED COARSE GRAINED SANDSTONE. SLIGHTLY ALTERED.													
200.1	216.0	15.9		COARSE GRAINED, WEAKLY PORPHYRITIC GRANITE. WEAKLY ALTERED.													

04

506050

GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE LOG AND ASSAY DATA

PROJECT: Mt. Lindsay HOLE NUMBER: ML 62 Page: 2.

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION
				DETAILED LOG
				0-17.6 HORNFELSED, INCIPIENTLY ALTERED SANDSTONE.
0.0	3.0	3.0	100	Weakly weathered, purplish-brown sandstone with white cherty bands at approx 45°CA, around 10cm thick. Weakly fractured and incipiently altered.
3.0	7.0	4.0	100	Dark brownish grey, medium-fine grained muddy sandstone with very thin, white cherty horizons irregularly shaped, at 45°CA. Also thicker(~10cm) chert beds. Pyrite occurs as syn-sedimentary? infillings and evidence of soft sediment deformation such as dewatering structures occur. Pyrite also forms/is remobilised? veins which show cross-cutting relationships. Overall incipiently altered, with actinolite weakly developed in the thicker chert units.
7.0	17.6	10.6	100	Mixed lithologies of coarse brown sandstones, pale grey siltstones and rare chert beds all irregularly bedded. Alteration and veining are as above, both very weakly developed. Veins have thin (2-3cm) actinolitic alteration haloes. At 13.6, a poorly developed stockwork of increased alteration, thin quartz-pyrite veins, to 20cm.
				17.6-27.7 BANDED CHERTS AND SILTSTONES
17.6	23.8	6.2	100	Chert rich bands within a dark grey silststone, very fine grained. Pyrite is common, especially within the cherty sediments. Very weakly fractured with very thin talc coatings.
23.8	24.8	1.0	100	Brown, moderately strongly pyritic chert bed. Pyrite occurs in primary stratabound? mineralisation weakly altered.
24.8	26.4	1.6	100	Dark siltstone, very fine grained with white chert beds. The latter are fractured with offsets of several mm, now sealed with

ASSAY DATA Sample No.	From	To	Rec. %									

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 62 Page: 3.

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	Sn	As	WO$_3$	Cu	Pb	Zn
				ASSAY DATA (all in ppm)										
				pyrite. At 25.1, a 10cm thick pyrite filled fracture. Actinolitic alteration occurs in the chert units.	3251	26.0	28.0	100	10	30	10	155	60	50
26.4	27.7	1.3	100	Chert, banded with green actinolitic and pink garnet alteration. Shows soft sediment deformation with large lenses of pyrite (0.5cm). Thin green sandstone bands. At 26.9, a zone of massive disseminated pyrite and actinolite with minor quartz + carbonate.										
				27.7-80.7 WEAKLY ALTERED HORNFELSED SANDSTONE.										
27.7	42.2	14.5	100	Medium grained, grey-brown sandstone with several chert beds. The sandstone is mixed-coarser brown (more hornfelsed?) and finer grey. Moderately abundant sulphides occuring as thin veinlets with quartz. At 36.5, minor chalcopyrite-pyrite in veins for 10cm. At 41.0, 0.5m of interbedded chert-sandstone, veined (pyrite) and altered (actinolitic-green). Overall weakly altered and unfractured.	3252	36.0	37.0	100	10	20	20	140	410	65
42.2	46.9	4.7	100	Medium grey, coarse grained sandstone. Very rare chert (white) occurs as thin horizons. Pyrite and rare chalcopyrite form veinlets. Unfractured and unaltered.										
46.9	48.3	1.4	100	Alternating fine grained grey sandstone and light green altered chert. Very weakly fractured.										
48.3	50.6	2.3	100	A chert bed with layers of pink and green alteration (the green occurs in sandier lenses). Some soft sediment deformation. At 49.0, 20cm of leached, brown gossan-like sulphide and calcite, weakly fractured. At 49.6, a 5cm zone of sand-silt and clay-green in colour. Possibly a fault? Several veins of brown vuggy quartz with dark green alteration haloes, 2-3cm thick occur next to this zone.	3253	49.0	50.0	100	<10	20	10	115	160	205
50.6	56.1	5.5	100	Sandstone, medium to fine grained with thin chert horizons and a few thicker (5cm) ones. Brown grey (sandstone) and										

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 62

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No	From	To	Rec. %	Sn	As	WO_3	Cu	Pb	Zn
				white (chert). Abundant pyrite within chert units. Unfractured and unaltered aside from small weakly altered zones.										
56.1	57.8	1.7	100	Chert, strongly pyritic and chert-sandstone (white-green) beds (altered) occur for 40cm. This is underlain by 1.3m of strongly altered, green calcareous sediment, now vuggy carbonate, green actinolite and quartz, with accessory pyrite, chalcopyrite sphalerite and galena? as disseminations. Quartz veining is weakly developed. Alteration is pervasive and strong with abrupt changes into very weakly altered rock either side.	3254	56.0	58.0	100	-	30	<10	515	100	185
57.8	71.6	13.8	100	Brown coarse grained sandstone, with alternating fine grained, grey siltstone-sandstone irregualry bedded with white chert bands. Quartz and pyrite veins occur and alteration is very weak. Irregular lithologic changes take place with coarse grained sections and at 63.1, a 10 cm breccia-clast rich was found. Unfractured. Between 63.5 and 64.7, a large chert rich bed, green and white with fine dark grey sediments and moderately abundant pyrite. At 64.7, 0.9m of black siltstone with many thin pyrite-horizons subparallel to bedded at 45°CA.										
71.6	72.1	0.5	100	Strongly altered calcareous sandstone. Pervasive green actinolitic alteration, common pyrite, quartz (large blotches) and some brown mineral-unknown. No other sulphides, mosaic-like appearance.	3255	71.1	72.1	100	<10	<10	10	170	430	80
72.1	80.7	8.6	100	Hornfelsed, spotted sandstone with large white (quartz?) grains and brown (micaceous) crystals. Overall dark grey and coarse grained. Unfractured, unaltered and no sulphide. At 74.5, 0.5m of chert rich irregularly bedded sediment.										
				80.7-90.3 MODERATLEY ALTERED CHERT										
80.7	81.7	1.0	100	Chert bed with pale pink green actinolite-garnet alteration. Rare sulphide, irregularly bedded.										

(ASSAY DATA all in ppm)

GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE LOG AND ASSAY DATA

PROJECT: Mt. Lindsay HOLE NUMBER: ML 62 Page: 5.

INTERVAL From	To	RECOVERY m	%	DESCRIPTION	Sample No.	From	To	Rec. %	Sn	As	WO_3	Cu	Pb	Zn
					ASSAY DATA (all in ppm)									
81.7	82.0	0.3	100	Strongly altered calcareous sandstone with abundant sulphide including chalcopyrite, carbonate, dark and light green actinolite, throughout. At 81.9, a 1cm thick vuggy quartz-carbonate vein.										
82.0	82.9	0.9	100	Pale green chert with very thin lenses of dark green sandstone, moderately altered. Numerous fractures.	3256	81.0	84.0	100	20	80	<10	80	110	30
82.9	83.2	0.3	100	Strong altered sandstone, with pink garnet, brown biotite, green actinolite, quartz and minor sulphides.										
83.2	90.3	7.1	100	Moderately altered chert, very irregularly bedded. Pink-green and pale grey in colour. A few vuggy pyrite veins exist with patches of stronger green pyritic alteration in fine sediment-chert beds. Unfractured with many veins and veinlets. A few massive 'blobs' (1-2cm) of pyrite. Grades into unit below.										
				90.3-133.1 WEAKLY ALTERED SILTSTONE										
90.3	105.9	15.6	100	Very fine grained dark grey siltstone with cherty horizons. Weak to unaltered with slight pink colour in cherts. Moderately pyritic. Patches of coarser grained biotite (brown) rich sandstone. Between 92.0 and 94.0, larger (10-30 cm thick) irregular beds of chert occur. After 99.8, cherts increase to make a sequence of alternating chert-siltstone-unaltered.										
105.9	124.8	18.9	100	Light grey, very fine grained sandy siltstones with a few 20-30 cm thick medium grained brown-grey sandstones. Also a few fine mud-chert layers. Irregularly bedded and weakly altered with pyrite and rare chalcopyrite, mainly as veinlets. Cross-bedding structures occur. Hornfelsed. At 117.3, 0.5 m of dark calcareous, strongly altered rock. Pink and black veins and calcite as veins, patches and pervasive. Minor sulphides.										

053

506054

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 62 Page: 6.

INTERVAL		RECOVERY		DESCRIPTION	ASSAY DATA (all in ppm)									
From	To	m	%		Sample No.	From	To	Rec. %	Sn	As	WO_3	Cu	Pb	Zn
124.8	128.0	3.2	100	Black-dark grey siltstone, with beds of brown-grey fine grained sandstone. A few veins of pyrite and chalcopyrite, also synsedimentary stratabound pyrite. Thin (10-20cm) and very thin (several cm) cherty siltstones (green-altered) occur. At 127.5, 15cm of vuggy, altered, green actinolite, fine grained disseminated sulphide and quartz, beneath a thin (2mm) sulphide -carbonate vein at 90°CA.	3257	124.0	125.0	100	<10	30	<10	150	60	30
128.0	129.0	1.0	100	Hornfelsed brown sandstone, moderately altered-incipiently silicified. Fine sulphides are disseminated throughout, with carbonates patchily developed. At 128.4, at 45°CA, a 0.5cm quartz-tourmaline vein.	3258	128.0	129.0	100	100	30	<10	130	40	30
129.0	133.1	4.1	100	Interbedded black siltstone and pale grey chert, 0.5m to 1.0m thick beds. Thin syn-sedimentary sulphide beds-remobilised into veins. Some cherts are pink-green altered and contain massive sulphide pods (pyrrhotite?). At 131.6, 10cm of unusual actinolite + calcite + pyrite + massive muscovite alteration.										
				133.1-142.2 UNALTERED HORNFELSED SANDSTONE										
133.1	142.2	9.1	100	Dark brown (hematitic?) sandstone, medium to very fine grained. Some coarser grained beds and thin chert beds (10-20cm). Unaltered apart from cherts which are pink-green and relatively sulphide rich. Sulphides are uncommon in the coarser grained units. At 135.0, minor chalcopyrite in sulphide in chert bed and at 136.5, a 0.5cm vein, 10°CA, of quartz, sulphide with a large vug in the centre.	3259	134.5	135.5	100	<10	30	10	110	30	30
				142.2-173.9 WEAKLY ALTERED INTERBEDDED CHERT AND SILTSTONE										
142.2	155.9	13.7	100	Siltstone, dark grey and fine grained with several 10-20cm thick chert beds. Incipiently altered siltstone and weakly altered chert with pyrrhotite in the cherts and pyrite-chalcopyrite in the siltstone. Between 143.0 and 145.0, the veins are	3260	143.0	145.0	100	10	10	20	120	20	40

506055

GOLD FIELDS EXPLORATION PTY. LIMITED

ULV. PRESS

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 62

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %
				well developed and thick, richer in chalocpyrite. At 155.0, sand-stone lenses (brown) appear.				
155.9	160.9	5.0	100	Light grey chert with patches of strong alteration; green actinolite, pink garnet, calcite and sulphides (pyrite)- 20-30cm thick. Calcite veins occur. The chert is banded- darker and lighter grey bands. The sulphide content is low.				
160.9	167.2	6.3	100	Medium to coarse grained, brown sandstone with rare, thin (several cm) cherty lenses. No sulphides, unaltered and numerous quartz veins (metamorphic). Unaltered, mica rich, massive, hornfelsed sandstone.				
167.2	173.9	6.7	100	Banded pink-green chert. Relatively fresh with rare sulphides-pyrite, and few veins. Irregularly bedded.				
				173.9-200.1 HORNFELSED COARSE GRAINED SANDSTONE				
173.9	200.1	26.2	100	Coarse grained micaceous sandstone with a few chert beds. (Coarse grained due to hornfelsing). Very minor pyrite develop-ment. Many quartz veins occur, some showing pinch and swell structures. At 183.9, lenses 10-20cm thick, of calcite actin-olite and minor pyrite - altered zones. After 186.5 most of the quartz veins have a thin (several mm) siliceous halo. At 195.8, the rock becomes moderately fractured, blocky, with pale blue clay coatings (very thin). At 199.0, a few quartz-tourmaline veins. 0.5cm thick, 20°CA. The last 1.0m is pale brown coloured and fine grained (possibly completely recrystallised).				
	200.1			CONTACT				
				200.1-216.0 WEAKLY ALTERED GRANITE				
200.1	204.1	4.0	100	Weakly sericitised granite. Coarse and fine grained with				

055

506056

GOLD FIELDS EXPLORATION PTY. LIMITED

PROJECT: Mt. Lindsay

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: ML 62

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %
				green (dark and light) sericitised micas. Weakly porphyritic with phenocrysts of quartz and feldspar. Some zones of pervasive silicification and a few tourmaline veins. At 203.6, a massive, 10cm zone of quartz-tourmaline (nodule).				
204.1	216.0	11.9	100	Fresh, grey, moderately porphyritic granite. Feldspar phenocrysts up to 1.5cm, quartz to 1.0cm, rare pale green sericitised feldspars and large black "book" biotites. At 207.0 10cm of quartz-tourmaline (nodule) underlain by 30cm of increased sericitisation. Between 209.0 and 210.0, increased sericite development surrounding 2 quartz tourmaline veins. At 214.2, 5cm of massive quartz-tourmaline (nodule) coarse grained.				
				END OF HOLE				

APPENDIX 4

Morrison, G. : Petrography of skarn specimens from Drill Hole ML61, Parsons Hood, Tasmania. May, 1983.

057

506058

PETROGRAPHY OF SKARN SPECIMENS
FROM DRILL HOLE ML 61,
PARSONS HOOD, TASMANIA

FOR

RENISON GOLDFIELDS EXPLORATION,
BURNIE

Gregg Morrison
James Cook University
May, 1983.

SUMMARY

A suite of eighteen specimens from drill hole ML 61, Parsons Hood, Tasmania has been studied in hand specimen and thin and polished section. The suite comprises banded sequences of biotite, quartz, amphibole and clinopyroxene hornfels and clinopyroxene, garnet, vesuvianite-magnetite and red garnet-green vesuvianite skarns. The mineral assemblages and textures suggest progressive overprinting in the order listed. Pyrrhotite is a major component of the biotite hornfels, occurs as veins in the quartz and clinopyroxene hornfels, as relics in the clinopyroxene and garnet skarns and is absent from the vesuvianite-bearing skarns. Minor chalcopyrite and arsenopyrite occur in the same settings. Magnetite occurs mainly in the vesuvianite-bearing skarns but is also present locally in cavities in garnet skarn. No cassiterite has been observed.

The skarns and hornfelses originated from thinly interbedded greywacke, siltstone, pyritic shale and limestone. Biotite hornfels, marble and some amphibole and clinopyroxene hornfels formed by contact metamorphism. Subsequently a magmatic fluid passed through the banded hornfels and marble leaching Fe, Mg and Si from the hornfels and Ca from the marble and then precipitating skarn minerals in a zoned reaction skarn sequence from amphibole and clinopyroxene on the hornfels side to garnet, vesuvianite and magnetite on the marble side. All the elements necessary for skarn formation were derived from within the sedimentary rock and there was no addition of Sn-F-Be-W from the granite at this locality.

Although there is a consistent zoning sequence in the skarns the vesuvianite-magnetite and garnet skarns are not always present. This combined with the absence of marble suggests the original limestone beds were completely consumed in formation of reaction skarn even before precipitation of the last reaction skarn zones. In classic cases such as Mt. Lindsay or King Island mineralised skarn is a late stage replacement of permeable, soluble marble that remains after formation of reaction skarn. Complete replacement of marble by reaction skarn at Parsons Hood rendered the rocks impermeable to mineralising solutions.

Sequences with thicker limestone beds and areas further from the intrusive contact than ML 61 are likely to have less extensive reaction skarn development and hence more room for magnetite-sulphide-cassiterite infiltration skarn. Such skarns should have coincident magnetic, I.P. and geochemical anomalies that should be distinguished from anomalies related to the sulphide-poor magnetite reaction skarns or pyrrhotite-rich hornfelses typified by ML 61.

INTRODUCTION

A suite of specimens from drill hole ML 61 (Parsons Hood) was submitted by Paul Roberts for handspecimen, thin section and polished section descriptions and interpretation. The following specimens have been described. (h=handspecimen, t=thin section, p=polished section)

4.0 - 4.4 (h, t, p)
10.0 (h, t, p)
15.0 (h, 2 thin sections)
28.0 (h, t, p)
36.5 (h, t)
41.0 (h with 36.5)
41.9 (h with 36.5)
53.5 - 54.2 (h with 136.3 - 136.8)
67.7 (h, t)
79.6 - 80.3 (h, t at 79.7, 79.8)
98.0 (h with 98.3)
98.3 (h, t)
99.1 (h with 100.2, 101.3)
100.2 (h, t with 99.1, 101.3)
100.7 (h, t)
101.3 (h,t with 99.1, 100.2)
119.3 - 119.6 (h, t at 119.3, 119.5)
136.3 -136.8 (h, t at 136.3, 136.4 with 53.5 - 54.2)

No X-ray diffraction or microprobe work has been carried out on the specimens. Positive confirmation of the ideas postulated here and detailed comparison with the data from Mount Lindsay would require it.

MINERAL ASSEMBLAGES AND ZONING SEQUENCES

The specimens described have been classified as biotite hornfels, bleached hornfels, amphibole hornfels, clinopyroxene hornfels, clinopyroxene skarn, garnet skarn, vesuvianite-magnetite skarn and red garnet-green vesuvianite skarn. The mineral assemblages (Table 1) and their textural relationships suggest progressive overprinting in the order listed and there is also an actinolite-epidote-calcite-sphene-phlogopite assemblage that overprints all but the red garnet-green vesuvianite skarn.

The biotite hornfels (specimens ML 61 - 36.5, 136.4) is characterised by biotite and pyrrhotite and interpreted as a product of contact metamorphism of shale, siltstone or sandstone with variable proportions of original clay minerals, pyrite, quartz and feldspar. The bleached hornfels (4, 28, 36.5, 136.3) is gradational into the biotite hornfels and is characterised by clinopyroxene rather than biotite and an abundance of amphibole-pyrrhotite veins which terminate in the adjacent biotite or amphibole hornfelses. The amphibole hornfels (79.7, 119.3 -119.5) locally cuts the bleached hornfels and is characterised by the association of pale amphibole (tremolite-actinolite) + pyrrhotite with quartz and feldspar. It is interpreted in part as an equivalent of the biotite hornfels in shales that originally contained some carbonate and hence produced amphibole rather than biotite (79.7) and in part as a transition from biotite hornfels to clinopyroxene hornfels where the bleached hornfels is absent. The clinopyroxene hornfels (4, 15a) is gradational into the bleached hornfels but is distinguished by having a green colour due to a higher proportion of clinopyroxene relative to quartz and feldspar. The presence of plagioclase and possibly scapolite replacing original feldspar suggest the clinopyroxene hornfels has been metasomatised with addition of calcium presumably from an adjacent carbonate horizon. The clinopyroxene skarn (10, 15, 100.2, 101.3) is partly overprinted by garnet skarn and distinguished from clinopyroxene hornfels by an association with coarse calcite rather than quartz and feldspar. Veins are uncommon in the clinopyroxene skarn. The garnet skarn (10, 15, 100.2, 101.3) is spots and patches overprinting the clinopyroxene skarn and locally massive granular bands with intergranular cavities.

Table 1: Summary of Mineral Assemblages

name	biotite hornfels	bleached hornfels	amphibole hornfels	clinopyroxene hornfels	clinopyroxene skarn	garnet skarn	vesuvianite/ magnetite skarn	red garnet green vesuvianite
colour	dark brown	buff	grey to dark green	lightgreen	grey-green	grey-brown	light grey	blood red
texture	banded to granular	patchy,veined	granular	granular, massive	granular, massive	spotted massive	massive, granular	massive, granular bladed
minerals	biotite pyrrhotite quartz feldspar	quartz feldspar clinopyroxene	trem-actinolite epidote sphene pyrrhotite quartz feldspar	clinopyroxene plagioclase phlogopite sphene pyrrhotite scapolite?	clinopyroxene calcite sphene pyrrhotite	garnet cavities with vesuvianite pyrrhotite magnetite	vesuvianite calcite magnetite	blood red garnet green bladed vesuvianite magnetite calcite
veins	biotite pyrrhotite quartz	trem-actinolite calcite pyrrhotite quartz sphene phlogopite arsenopyrite	trem-actinolite calcite chlorite pyrrhotite chalcopyrite quartz	trem-actinolite calcite chlorite pyrrhotite chalcopyrite quartz	rare	trem-actinolite epidote calcite sphene phlogopite chlorite	trem-actinolite epidote calcite sphene phlogopite chlorite	absent

The cores of the garnet grains are full of fine clinopyroxene inclusions and are anisotropic suggesting grossular-rich composition. The rims on the other hand are inclusion-poor and isotropic (andraditic) and face cavities that contain calcite locally with pyrrhotite, or vesuvianite + magnetite. Locally (98.3) there are discrete bands of colourless vesuvianite+ magnetite + calcite skarn that are an extension of the cavities in garnet skarn. In the specimen, the vesuvianite is extensively altered to ferro-hastingite and there is a yellow-coloured garnet replacing calcite interstitial to the vesuvianite. Elsewhere, similar garnet that is blood red in hand-specimen (100.7) coexists with distinctive green acicular vesuvianite. These two skarn types are only common in the hole between 94 and 102m where there is also slightly higher tin content.

The generally banded nature and close association of skarn and hornfels, the consistent zoning sequence, the persistence of pyrrhotite and hornfels minerals into the skarn zones and the overprinting relationships suggest most of the skarn in ML 61 has been derived by reaction or bimetasomatic exchange between adjacent quartzo-feldspathic and carbonate beds rather than by input of skarn-forming elements from a magmatic fluid into a clean limestone. In such a situation the overall composition of the skarn is directly related to the composition of the original sedimentary rocks and any ore formed will probably reflect original anomalous concentrations in the sedimentary rocks.

Given that the original sedimentary rocks were interbedded pyrite and clay rich shales, quartzo-feldspathic sandstones, siltstones and limestones then the following sequence of events is envisaged. At magmatic and submagmatic temperatures contact metamorphism formed biotite-pyrrhotite hornfels in the shale, amphibole and clinopyroxene hornfels in limey siltstones and sandstones and marble in the limestone. Upon expulsion of a fluid from the granite at temperatures around 600°C interaction between adjacent interbeds was established. The biotite hornfels was leached of iron and magnesium adjacent to the permeable limestone horizons forming the bleached hornfels and the fluid combined with calcium from the limestone to produce a zoned sequence from tremolite hornfels to clinopyroxene hornfels in the siltstone to clinopyroxene, garnet and vesuvianite skarns in the limestone. Because of declining temperature progressively more iron-rich phases were precipitated leading to the observed time sequences of iron enrichment in amphiboles and garnets and the eventual precipitation of magnetite. The persistence of pyrrhotite through the hornfels and into the garnet skarn reflects original fluid chemistry, the original abundance of pyrrhotite and incomplete leaching of the original shale.

The relative thickness of adjacent beds controlled the thickness of hornfels and skarn bands and the completeness of zoned sequences. For example with very thin limestone interbeds, all the carbonate may be used up in the formation of clinopyroxene skarn and no garnet skarn would form. Typically in ML 61 the limestone beds were thick enough for limited garnet skarn formation. Only where the garnet skarn (hence original limestone) was thicker do the vesuvianite-magnetite and red garnet-green vesuvianite skarns appear.

In skarn formation in general, the formation of reaction skarns preceeds the formation of infiltration skarns which are the products of deposition from the magmatic fluid. For example, at King Island, limestone relics between bands of barren light coloured clinopyroxene-garnet reaction skarns are replaced by dark garnet-scheelite infiltration skarns. It appears that in ML 61 all the limestone was replaced by reaction skarn so that there was nowhere to precipitate infiltration skarn. The low tin grade and the absence of minerals such as fluorite and tourmaline in the samples studied suggest such a fluid may not even have been present. The last formed skarn with red garnet-green vesuvianite (specimen 100.7) is the most likely tin-bearing assemblage in this scenario and should be tested as such. Given that an infiltration fluid was present in the general area, ore-formation would require thicker limestone interbeds in the sequence.

COMPARISON WITH MOUNT LINDSAY

Although the general geologic setting and the gross skarn mineralogy of Parsons Hood is similar to Mount Lindsay, the sequence and origin of skarn assemblages in the two areas are radically different. All the Parsons Hood skarn assemblages have been related to reaction between quartzo-feldspathic and carbonate beds in the previous section. Kwak (1982, unpublished manuscript) while recognising the presence of reaction skarns at Mount Lindsay relates tin-bearing vesuvianite, garnet, magnetite skarns to high temperature precipitation from an Sn-F-Be-W rich infiltration fluid and cross-cutting amphibole and biotite skarns to subsequent retrograde alteration. Such a fluid did not gain access to the Parsons Hood skarns because of impermeability caused by reaction skarn formation. Consequently, there is no detailed comparison possible between the two areas. Microprobe analyses of representative skarn minerals from Parsons Hood would allow a more detailed check against the Mount Lindsay skarns.

ML 61 - 4.0 to 4.4

Name: Altered siltstone with skarn laminae

Handspecimen: pale grey, banded, deformed and bleached siltstone with local sandy and cherty bands. Partial bands, patches and veinlets with actinolite, calcite, quartz and sulphides. The sulphide association appears to preferentially replace certain laminae, infill fold hinges and occupy cross-cutting veinlets. Pyrrhotite is the dominant phase but chalcopyrite is present in some of the veinlets.

Thin section: fine bands consist of very fine subrounded grains of quartz and feldspar with grain size grading toward coarser bands corresponding with increasing abundance of interstitial subhedral clinopyroxene grains. The coarser bands have a higher proportion of coarser, more euhedral clinopyroxene grains, secondary Ca-rich plagioclase, notable sphene, a colourless mica probably phlogopite,euhedral interstitial and poikilitic pyrrhotite and relics of original feldspar and quartz.

The pyrrhotite-rich crumpled laminae consist of coarse euhedral clinopyroxene with interstitial and poikilitic pyrrhotite and an interstitial yellow, moderate relief phase with high birefringence that may be a mica of the phlogopite type. Minor garnet and sphene are also in some of the bands.

The veinlets contain pyrrhotite, chalcopyrite, chlorite, carbonate and locally actinolite as a replacement of clinopyroxene where the veinlets cut clinopyroxene-rich bands.

Interpretation: the original rock was a quartzo-feldspathic siltsone with local gradation into thin laminae of carbonate-bearing quartzo-feldspathic sandstone. During contact metamorphism and high temperature contact metasomatism, clinopyroxene nucleated around carbonate grains in the siltsone and sandstone until all the carbonate was consumed. Local very thin laminae of near pure carbonate were converted to euhedral clinopyroxene grains with interstitial recrystallised carbonate. The crystalline carbonate was replaced by pyrrhotite and the clinopyroxene partly altered to phlogopite during a later lower temperature retrograde event. The latest retrograde event filled fractures with chlorite-carbonate- pyrrhotite-chalcopyrite.

ML 61 -10

Name: Garnet reaction skarn

Handspecimen: grey-brown, massive, granular garnet-bearing skarn with intergranular cavities with epidote-calcite-sulphides. Some pieces are gossanous, have patches of pyrrhotite and relict grains of garnet to 3mm diameter. Chalcopyrite is locally associated with pyrrhotite.

Thin section: there are three bands in the section with gradational contacts. The two outer bands consist of granular clinopyroxene in a matrix of interlocking calcite with local irregular patches of isotropic garnet that poikilitically encloses the clinopyroxene and locally calcite as well. The central band has a granular interlocking texture of rounded to euhedral garnet locally with interstitial angular cavities with euhedral vesuvianite, calcite and minor magnetite. The garnets are typically zoned from anisotropic cores with abundant rounded inclusions of clinopyroxene and minor calcite to narrow isotropic inclusion-poor rims which define euhedral grain boundaries against the cavities.

The pyrrhotite is coarse ragged grains interstitial to the garnet poikilitically enclosing clinopyroxene in areas where calcite is abundant and locally enclosing cavity-type vesuvianite. It appears to be a replacement of original calcite but is not accompanied by alteration of clinopyroxene, garnet or vesuvianite except in one or two spots. At these spots, brown biotite replaces garnet and there is minor quartz, epidote, sphene and calcite in part replacing vesuvianite.

Interpretation: the original rock was a slightly impure limestone that was converted to a pyroxene-bearing marble then metasomatised initially to CaAl garnet then progressively to more CaFe-rich (isotropic) garnet. The banding is likely parallel to original concentrations of impurities in the limestone and the abundance of calcite suggests metasomatism was incomplete. This in turn suggests the metasomatising fluid was poor in skarn-forming components or was not active over large distances. Alternatively the skarn is a product of reaction between adjacent siltstone and limestone bands and the specimen is taken in the limestone near the contact (clinopyroxene-calcite-garnet) and toward the centre (garnet-vesuvianite-calcite).

ML 61 - 15a,b

Name: Garnet-clinopyroxene reaction skarn

Handspecimen: dark grey-brown skarn with alternating irregular bands of fine-grained clinopyroxene skarn and coarser granular dark brown garnet skarn with cavity filling calcite.

Thin section: the dark grey bands that are up to 1cm thick and continuous consist of roughly equal proportions of subhedral brown clinopyroxene and carbonate with minor interstitial sphene and an opaque phase probably pyrrhotite. Locally there are patches of relic granular feldspar presumably from the original sedimentary rock and elsewhere coarse (1-2mm) grains of poikilitic,isotropic garnet with abundant clinopyroxene inclusion. Contacts with the garnet-rich bands are sharp but irregular. Elsewhere, particularly in slide ML 61 - 15a there are irregular green bands with patches of garnet skarn. The green patches consist almost entirely of anhedral clinopyroxene with some poikilitic garnet, some relic feldspar and quartz and pyrrhotite. Locally there are patches of coarse vesuvianite partly altered to epidote and chlorite between the green patches and garnet bands. The garnet bands consist of coarse euhedral interlocking isotropic garnet with abundant clinopyroxene inclusions near contacts with clinopyroxene-bearing bands but few inclusions in central areas where cavities are more common. The cavities all contain coarse calcite and locally small irregular grains of an opaque mineral probably magnetite.

Interpretation: the original rock was probably a banded variably impure limestone in which the more impure bands have been replaced in part by clinopyroxene and the purer bands in part by garnet. The euhedral garnet and cavities are an overgrowth of the early garnet and clinopyroxene. There is a notable absence of interstitial oxide and sulphide phases and of hydrous retrograde alteration in the skarn. No fluorite occurs in the cavities. The texture and mineralogy and absence of the above noted phases and alteration suggest the skarn may be of 'reaction skarn type' generated by redistribution of components within a section of impure sedimentary rocks rather than by input of components from a pluton.

J69

506070

M1 61 -28.0

Name: Pyroxene hornfels with retrograde patch

Handspecimen: pale grey buff hornfelsed siltstone with veinlets, patches and cavities containing actinolite, calcite, pyrrhotite and locally arsenopyrite.

Thin section: the hornfels is a very fine-grained mass of clinopyroxene with spots of sphene and another phase possibly plagioclase or scapolite and veins of pale green bladed clinopyroxene and calcite. The veins converge in a patch of very coarse calcite that contains needles of pale green tremolite-actinolite, plates of colourless phlogopite, patches of arsenopyrite and relics of the clinopyroxene hornfels partly converted to tremolite-actinolite. Sphene is locally abundant.

Interpretation: the assemblage tremolite-actinolite-phlogopite-calcite-pyrrhotite is a fairly typical retrograde product of clinopyroxene hornfels. The local presence of arsenopyrite in the same setting as pyrrhotite but not associated directly with pyrrhotite is not reflected in the assay data for this section suggesting it is a quite local feature. Observations on larger specimens suggest retrograde patches of this type are restricted to bleached and hornfelsed siltstone and do not cut garnet skarn in general.

ML 61 - 36.5 to 41.9

Name: Hornfelsed sulphide-rich shale

Handspecimens: variety of specimens representing variable recrystallisation and hornfelsing of an original siliceous, pyrrhotite-rich siltstone. In the least altered specimens (41.9) sulphides are concentrated in irregular laminae and lenticular sulphide veins subparallel to the laminae. In moderately altered specimens there are silica-rich bands and cross-cutting gash type fractures filled with pyrrhotite. The most altered specimens (36.5) are completely siliceous and have all the pyrrhotite in a network of fractures.

Thin section 36.5: has one siliceous band characterised by an absence of disseminated sulphide, an extremely fine matrix of anhedral quartz and feldspar with grains of clinopyroxene and discrete laminae with concentrations of sulphide, brown biotite and quartz grains. Another band consists of irregular lenses of pale green bladed tremolite-actinolite and sulphide separated by irregular laminae similar to the siliceous band. The more typical part of the section consists of irregular laminae with similar overall mineralogy but different relative proportions of quartz and feldspar, brown biotite and pyrrhotite with minor sphene and clinopyroxene. Cross-cutting veinlets are characterised by coarser more euhedral pyrrhotite, biotite and quartz. Overall, pyrrhotite plus biotite makes up 50 to 60% of the rock.

Interpretation: the rock was originally a sulphide (? pyrite) -rich shale that has been converted to a biotite-pyrrhotite-rich hornfels. The one band containing tremolite-actinolite may be a hornfels of a more carbonate-rich horizon or a metasomatic product related to mobilisation of much of the biotite and sulphide out of similar rocks located closer to more permeable carbonate horizons.

ML 61 - 67.7

Name: Garnet - pyroxene reaction skarn

Handspecimen: grey-brown, weakly banded, blotchy textured coarse zoned garnets in a matrix of fine pyroxene hornfels. Similar ML 61 -15.0

Thin section: grey-green areas are coarse poikilitic grains of calcite with disseminated fine subhedral grains of clinopyroxene (about 30% clinopyroxene) and minor sphene and coarse ragged pyrrhotite. The red blotches are sparse (3-4mm) rounded, partly zoned anisotropic, poikilitic garnets with inclusions of clinopyroxene. Cavities interstitial to garnet are rare in this specimen except in garnet-rich bands in some of the handspecimens.

Interpretation: very similar to ML 61 -15a. Originally a slightly impure limestone partly converted to pyroxene marble, then overprinted by garnet. Minor pyrrhotite is within the clinopyroxene marble.

ML 61 - 79.6 to 80.3

Name: Clinopyroxene, amphibole and garnet reaction skarn and hornfels

Handspecimens: banded and patchy textured siltstone, shale, hornfels and skarn. The distribution of rock types suggest the original rock was interbedded siltstone, shale and limestone that have been converted to bleached and veined hornfels; granular hornfels with wispy amphibole-rich patches; and dark granular garnet bands with cavities respectively.

Thin sections (79.7m, 79.8m): the light grey patches consist of medium to coarse subhedral clinopyroxene in a fine quartz-feldspar matrix. In 79.7 one of these patches is partly bound by a rim of patchy to spotted poikilitic garnet which is in turn in contact with a band in which stubby laths of actinolite and grains of epidote enclose relic patches of quartz and feldspar. This grades into a band in which there is a very high proportion of amphibole to quartz and feldspar and there is approximately 20% pyrrhotite associated with the amphibole. In 79.8 the green bands are a granular mixture of clinopyroxene with actinolite, some epidote and sphene and interstitial quartz and feldspar. Contacts with the garnet bands are characterised by presence of very few inclusions. They are cut by amphibole-carbonate veins and there is a zone in which two garnet bands are separated by a zone containing relics of both isotropic and anisotropic garnet, coarse epidote enclosing grains of sphene and apatite, calcite, a patch of fibrous phlogopite and numerous laths and needles of a spectacular blue-green to yellow pleochroic amphibole that is probably a ferrohastingsite.

Interpretation: these sections are fairly representative of alteration in a variety of starting materials. Original granular siltstone-sandstone which had only minor original clay and sulphide but some carbonate was converted to clinopyroxene hornfels. More shaley bands with more original clay, carbonate and sulphide was converted to amphibole-sulphide rich hornfels. More carbonate-rich bands were converted to garnet skarn and remaining carbonate as well as some of the garnet was replaced by epidote-calcite-ferrohastingsite-sphene-phlogopite. The fact that much of the original sedimentary sulphide is preserved in the hornfelsed shale and that there is little if any sulphide or magnetite in the cavities associated with the garnet skarn suggest these are reaction skarns rather than ore-type skarns.

ML 61 - 98.0, 98.3

Name: Amphibole - magnetite skarn

Handspecimens: massive green grey skarn of coarse granular amphibole, magnetite, calcite, red-brown garnet and a colourless prismatic phase (vesuvianite)

Thin section: granular textured skarn dominated by laths of poikilitic vesuvianite with a few inclusions of fine clinopyroxene, abundant actinolite that may be in part an alteration of the vesuvianite, euhedral magnetite and minor epidote, sphene, apatite, calcite, phlogopite and chlorite. The garnet is faint yellow in thin section, slightly anisotropic (intermediate grossular-andradite) and is in sharp grain boundary contact with magnetite but ragged irregular contact with vesuvianite and amphibole. It is typically associated with coarse calcite which locally fills cavities interstitial to the garnet and with coarse laths of amphibole.

Interpretation: although the relationship to other skarn types can not be determined from the specimens available, the following inferences could be checked against the rest of the core. The starting skarn material in this specimen was likely a very coarse grained vesuvianite-calcite + magnetite rock similar to that found interstitial to garnet-pyroxene skarn in specimens ML 61 - 10 and 15. This in turn suggests that the original starting material was fairly pure limestone. The vesuvianite has undergone retrograde alteration to amphibole (Ferrohastingsite), and magnetite and garnet have formed by replacement of some of the calcite. This interpretation suggests there are two generations of garnet in the Parsons Hood skarns - those developed as reaction skarns in thinly interbedded limestone (ML 61 - 10, ML 61 - 15) and those developed by late stage metasomatic replacement of calcite and associated with magnetite (ML 61 - 98.3) and slightly higher concentrations of tin.

ML 61 - 99.1, 100.2, 101.3

Name: Banded garnet-clinopyroxene reaction skarn with retrograde patches

Handspecimens: banded garnet-clinopyroxene skarn with discrete bands of dark brown rounded garnet with interstitial amphibole and sulphide superimposed on a matrix of fine-grained pale green clinopyroxene which locally also constitutes discrete bands.

Thin section (100.2, 101.3): section is generally similar to ML 61 - 15a and 67.7 in having a pale green fine-grained matrix of clinopyroxene with quartz and feldspar overprinted by coarse rounded grains of inclusion rich anisotropic garnet with darker isotropic rims. Two unusual features here are the abundance of inclusions of coarse pyrrhotite in the garnet in 100.2 and magnetite in 101.3 and the presence of patches of actinolite-calcite-epidote-sphene-phlogopite that are partly a replacement of calcite, partly a replacement of the garnet and partly inclusions within the garnet. In 101.3 this assemblage also makes up a narrow alteration band separating the garnet and clinopyroxene bands and encloses a coarse grain of chalcopyrite in the handspecimen.

Interpretation: superficially similar to the other banded garnet-clinopyroxene skarns but including some of the amphibole-calcite-epidote-sphene-phlogopite assemblage that is a retrograde alteration of garnet skarn elsewhere (ML 61 - 79.8).

075

500076

ML 61 - 100.7

Name: Garnet - vesuvianite ore skarn

Handspecimen: distinctive garnet-vesuvianite skarn characterised by blood red rounded garnet with interstitial fibrous vesuvianite, calcite and magnetite.

Thin section: the garnets are distinctly yellow-brown, completely anisotropic, generally have inclusion-rich cores and inclusion-poor rims and are zoned. The inclusions are mainly opaque minerals, amphibole and calcite in spots near the core but near the outer rim are aligned inclusions of calcite, green amphibole laths and a colourless phase (phlogopite?). The same minerals occur interstitial to the vesuvianite laths and garnet grains but there are also very coarse magnetite grains that are partly replaced by calcite and a green phase that is a mixture of clay, chlorite and opaque minerals. The vesuvianite is pale green laths and stubby prisms with fractures related to deformation during crystallisation adjacent to garnet. The fractures contain calcite, phlogopite and opaque minerals which may be optically continous with fracture fillings or inclusions in garnet.

Interpretation: the distinct colour of the vesuvianite and garnet, the fact that inclusions in the garnet typically only occur interstitial to garnet elsewhere and the break down of magnetite suggest this is a late stage garnet-vesuvianite skarn replacing a cavity fill assemblage that is elsewhere related to reaction skarn. This skarn is the closest approximation to 'ore-skarn' in this suite of rocks. It would be interesting to check if the garnet is tin-bearing.

ML 61 -119.3 to 119.5

Name: Hornfelsed & metasomatised greywacke

Handspecimen: grey-green amphibole-clinopyroxene type altered hornfels with cross-cutting veinlets and patches of pyrrhotite-amphibole-calcite-chalcopyrite and relics of biotite hornfels as well as of the original texture of interbedded greywacke, edgewise conglomerate and shale.

Thin sections (119.3, 119.5): the greywacke portion consists of original plagioclase grains and rock fragments now largely converted to fibrous light coloured (tremolitic) amphibole, spotty quartz, epidote, sphene and opaque minerals. The shale band has a selvedge of coarse amphibole with sphene and epidote and is itself a stringy textured mat of fibrous amphibole quartz and feldspar with lenticular patches of coarse amphibole and pyrrhotite. The veins and patches contain pyrrhotite, quartz, chlorite, calcite, tremolite and chalcopyrite.

Interpretation: original greywacke probably contained carbonate as well as clay and abundant plagioclase so that hornfelsing and metasomatism produced an amphibole dominant assemblage. The amphibole here is much less Fe-rich than that associated with the skarn.

077

506078

ML 61 - 136.3 to 136.8 and 53.5 to 54.2

Name: Bleached and metasomatised biotite hornfels

Handspecimens: brown buff and grey-green domains in altered clastic sediment originally siltstone and fine greywacke. The brown domain is biotite hornfels after fine greywacke with some rock fragments that has a grey-green rim against the other domains and cross-cutting veins of amphibole-sulphide. The buff domain is a bleached siliceous-looking equivalent of the biotite hornfels characterised by a network of fractures containing clinopyroxene amphibole and sulphide. The grey-green domain is irregular patches, bands and veins of coarse-grained clinopyroxene and amphibole.

Thin sections (136.3, 136.4): the biotite hornfels contains relic quartz-feldspar, and opaque minerals in a matrix of brown biotite and pale green amphibole. It has vein halos and rims against other domains in which all the biotite has been converted to amphibole. The bleached hornfels consists of granular interlocking quartz and feldspar with strings and isolated grains of amphibole, vesuvianite, epidote, sphene, calcite and opaque minerals. The veins contain amphibole, epidote, quartz, calcite and pyrrhotite and locally there is relic clinopyroxene altered to amphibole. The grey granular bands (136.3) are clinopyroxene with relic quartz and feldspar whereas rock fragments of fine material within them are dominantly tremolite and calcite. The dark green bands are coarse interlocking laths of actinolite enclosing relics of clinopyroxene and calcite and the very dark green veins are entirely green pleochroic actinolite.

Interpretation: biotite hornfels appears to develop in rocks that were originally rich in quartz and clay whereas those with plagioclase, rock fragments and calcite were converted to clinopyroxene or tremolite hornfels. Bleaching separates the iron-bearing phases from the biotite hornfels into veins and patches of actinolite-sulphide. It can be seen in the specimen that the dark amphibole veins cut across the bleached patches but terminate in the amphibole rims adjacent to the biotite hornfels. This suggests the processes described here are simply related to redistribution of material within the original hornfels.

APPENDIX 5

Bishop, J.R. : A Note on Drilling and Geophysics at Parsons Hood, 1983.

A Note on Drilling and Geophysics

at Parson's Hood, 1983.

Gold Fields drilled two holes (ML61 & ML62) on the Parson's Hood infill grid during the 1983 field season.

ML61 was designed to test a zone of anomalous geophysics (IP and magnetics) and soil geochemistry (tin and base-metals) crossing line 6 of the grid. Two barren skarn zones were intersected (with susceptibilities upto 0.01 cgs: background levels were at least two orders of magnitude less). Minor pyrite (?pyrrhotite) was encountered throughout the 150m hole which ended in sediments.

An approximate positioning of the drillhole on the composite profile (the drill log summary gives the AMG coordinates only) suggests that the two skarn zones are the sources for the two magnetic peaks recorded on line 6 and that the disseminated pyrite is responsible for the moderately high chargeabilities on the IP pseudosection. No down hole geophysics was carried out and it is suggested that some of the core may be IP tested to confirm the interpretation; particularly to see if the metal factor target was intercepted.

ML62 was designed to test a deep IP anomaly with a separated (100m-150m to the west) magnetic response which had near-coincident anomalous soil geochemistry (Sn, As, Cu). The 216m hole intersected hornfelsed sediments from the Crimson Creek Formation before entering granite at 200m. No skarn zones were encountered. Disseminated pyrite (?pyrrhotite) was distributed throughout the hole.

A down hole IP survey was attempted, however only a very short section was measured (176m to 202m, using a 3-array with a 2m spacing). Over the remainder of the hole, no meaningful readings could be made: this was attributed to the large amounts of grease (DAF type) used by the driller down the hole and to 'tight' rocks. Subsequent testing of this type of grease showed it to be highly resistive (no measurable current could be injected using the battery operated transmitter) and the highly asymmetric receiver response observed in the field was also noted in these tests. (The measured section showed a rise in chargeability from 20-30mv/v at 1[illegible]m to 185m, upto 82mv/v at 198m (returning to 50mv/v at 200m), with resistivities dropping from >10,000 ohm-m at 175m to 190m, down to <1,000 ohm-m at 200m.)

An approximate positioning of the hole on the IP pseudosection (again only AMG coordinates are given in the drill log summary) suggests that the hole passed over the main anomaly. However testing of some core samples showed that the rocks intersected do explain the anomaly: the table below shows that some very high IP effects and resistivities were recorded.

Positioning of the hole on the line profile suggests that the magnetic anomaly was due to hornfelsing at the granite contact, however no susceptibility measurements have been taken.

PETROPHYSICS: ML62 samples.

SAMPLE NO.	DEPTH (m)	RESISTIVITY (ohm-m at 30Hz)	PERCENT FREQUENCY EFFECT (at 30Hz and 300Hz)	COMMENT
13/1	11.8	74,854	26%	some visible sulphide veining
13/2	23.25	22,314	12%	some disseminated sulphides
13/3	29.	108	104%	prominent sulphide bands
13/4	43.9	1,293,231	178%	no visible sulphides
13/5	64.7	57,235	26%	some visible sulphide bands
13/6	77.	87,232	17%	minor visible sulphides

COMMENT:

These results are preliminary only. Before measurement, they were vacuum saturated on tap water for two weeks. However the rocks appear to be 'tight' and may require a much longer soaking period (eg, 4 months) before a proper set of measurements can be made. Therefore the resistivities above are probably somewhat high and the PFE may also be enhanced.

1% PFE is approximately equivalent to 5mV/V.

J.R. Bishop

J.R. Bishop
Sept., 1983

APPENDIX 6

Mt. Lindsay Drill Hole Log facing pages showing correct collar co-ordinate details.

R[illegible]SON LIMITED - DRILL CORE RECORD

506083 | 082

HOLE NUMBER	ML 1
PURPOSE	To test MAIN LODE
LOCATION	Aberfoyle Camp.
COLLAR R.L.	(1704') 2462 m estimated
CO-ORDINATES	(1902' N 3102' E) 32,113N 10,874E } estimated
LENGTH	50.1m (154.5')
HOLE SIZE	AXT
DATE DRILLED	Summer 1962 - 1963
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. L. Morton
COMMENTS	No core available. Individual assays unavailable. Hole not surveyed. Drilled on Aberfoyle Section 3100'E

SURVEY					VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	From – To	Distance D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G							
0	027°	-45°	0			2453.4		
			50.1	50.1	35.4	2418.0		35.4

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	8.8	23.8	12.8 (true)	0.77													

RENISON LIMITED - DRILL CORE RECORD

506084

HOLE NUMBER	M.L. 2
PURPOSE	To test MAIN LODE
LOCATION	Aberfoyle Camp.
COLLAR R.L.	2465 m estimated (1735')
CO-ORDINATES	32,100N 10,884E } estimated (ABERFOYLE 1881'N 3149'E)
LENGTH	61.3 (201')
HOLE SIZE	AXT
DATE DRILLED	Summer 1962 - 1963
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. Morton
COMMENTS	No core available. Hole not surveyed Drilled on Aberfoyle Section 3050'E.

SURVEY			From - To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	027°	-53°	0			2462.8		
			61.3	61.3	49.0	2413.8		36.9

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	30.5	36.9	5.5 (true)	0.75													
	41.8	43.6	1.4 (true	4.15													
	51.5	52.3	-	3.02													
	54.0	54.6	-	0.88													

RENISON LIMITED - DRILL CORE RECORD

506085

084

HOLE NUMBER	M.L. 3
PURPOSE	To test MAIN LODE
LOCATION	Aberfoyle Camp.
COLLAR R.L.	(1768') 2475.9m by Renison
CO-ORDINATES	32089.4mN (1882'N 10903.5mE 3225'E)
LENGTH	61.0m (200')
HOLE SIZE	AXT
DATE DRILLED	Summer 1962 - 1963
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. Morton
COMMENTS	No core available. Hole not surveyed Drilled on Aberfoyle section 3225'E.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	027°	-54	0		2475.9			
			61.0	49.4	2426.5			35.9

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A
	27.4	41.5	~~8.5~~ (true) (11.0m ?)	1.75													
Pyroxenite Zone	27.4	43.5	16.1m (13m E.T.T)	1.55													

RENISON LIMITED - DRILL CORE RECORD

085

506086

HOLE NUMBER	M. L. 4
PURPOSE	To test MAIN LODE
LOCATION	Aberfoyle Camp.
COLLAR R.L.	2445.5m (1678') 2446m estimated
CO-ORDINATES	(1930' N 3000'E) 32,136N 10,850E } estimated
LENGTH	45.7m (150')
HOLE SIZE	AXT
DATE DRILLED	Summer 1962 - 1963
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. Morton
COMMENTS	No core available Hole not surveyed Drilled on Aberfoyle Section 3000E

SURVEY					VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	From – To	Distance D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	027°	-45°	0			2445.5		
			45.7	45.7	32.3	2413.2		32.3

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	0	1.8	1.5 (true)	1.													
	10.9	19.2	7.6 (true)	0.24													

R[illegible]ISON LIMITED - DRILL CORE RECORD

086

506087

HOLE NUMBER	M. L. 5
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	(2023') 2555m } estimated
CO-ORDINATES	2018'N 1753'E 32,343N 10,532E }
LENGTH	93.3m (306')
HOLE SIZE	AX
DATE DRILLED	Summer 1963 - 1964
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. L. Morton
COMMENTS	No core available. Hole not surveyed. Total length of 51.5m sampled, but individual assays unavailable. No log available. Drilled on section 1750'E (Aberfoyle). (Fault recorded at 53.3m, correlates with fault in the Western Adit. Fault strikes 077, dip 68 to South).

SURVEY Depth	Bearing	Dip	From - To	Distance D	VERTICAL D.Sin.Dip	R.L.	HORIZONTAL D.Cos.Dip	Prog. Total
0	027°	-45°	0			2550.6		
			93.3	93.3	66.0	2484.6		66.0

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.
	77.2	89.6	16.5(true)	0.06													

506088

087

RENISON LIMITED - DRILL CORE RECORD

HOLE NUMBER	M. L. B
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	(2047')
CO-ORDINATES	2077' N 1898' E; 2562m, 10,580E, 32,340N } estimated
LENGTH	84.1 (276')
HOLE SIZE	AX
DATE DRILLED	Summer 1963 - 1964
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. L. Morton
COMMENTS	No core available. Hole not surveyed. Total length of 46m sampled, but individual assays unavailable. No log available. Drilled on Aberfoyle Section 1900'E.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	027°		0			2557.9		
		-51°	84.1	84.1	65.4	2492.5		52.9

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO$_3$	Ag g/t				
	53.9	60.4	5.8 (true)	0.19													
	65.0	66.8	1.4 (true)	0.13													
			( )	0.47													

HOLE NUMBER	M.L. 9
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	(2078.3')
CO-ORDINATES	2071.3'N 2050.9'E; 2571m / 32,318 N / 10,620E } estimated
LENGTH	91.1m (299')
HOLE SIZE	AX
DATE DRILLED	Summer 1963 - 1964
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. L. Morton
COMMENTS	No core available. Hole not surveyed. Total length of 45m sampled, but complete assays unavailable Fault recorded at 36.0m, and correlates with faults in M.L. 30 at 78.6, and in No 1 West X-Cut Strikes 073°, dips 56° south Drilled on Aberfoyle section 2050E.

SURVEY					VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	From – To	Distance D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	027°	-45°	0			2567.5		
			91.1	91.1	64.4	2503.1		64.4

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
Banded magnetite and sulphides	49.5	60.4	7.9 (true)	1.72													
" "	77.0	82.6	4.3 (true)	0.29													
[illegible] Zone	[illegible]	[illegible]	33.5														

HOLE NUMBER	M.L. 11
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	(2028') 2562m (estimated)
CO-ORDINATES	2356'N 2146'E 32,377N 10,640E (estimated)
LENGTH	95.7m (314')
HOLE SIZE	AX
DATE DRILLED	Summer 1963 - 1964
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. Morton
COMMENTS	No core available. Hole not surveyed Total length of 61m sampled, but individual assays unavailable. Drilled on Aberfoyle Section 2150E.

SURVEY Depth	Bearing	Dip	From - To	Distance D	VERTICAL D.Sin.Dip	R.L.	HORIZONTAL D.Cos.Dip	Prog. Total
	R.M.G.							
0	207°	-45°	0			2552.1		
			95.7	95.7	67.7	2484.4		67.7

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A
	46.3	47.2	0.6 (true)	0.67													
	51.8	52.1	0.2m	0.13													
	54.9	56.7	1 "	0.30													
	59.3	73.2	9.2m	0.44													
	50.9	81.7	30.8m														
			E.T.T. 18m.														

RENISON LIMITED - DRILL CORE RECORD

506091

090

HOLE NUMBER	M.L. 13
PURPOSE	TO TEST MAIN LODE
LOCATION	
COLLAR R.L.	2548.5 m. (2003.2')
CO-ORDINATES	32281.5mN (2116.0'N) 10707.9mE (2351.2'E)
LENGTH	84.4m (277')
HOLE SIZE	AX
DATE DRILLED	Summer 1963 - 1964
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	No core available. No log available. Hole not surveyed. May h ve thicker lode, if not faulted? Recorded as having intersected a fault; and with poor core recovery. Total length Of 7m sampled. Fault recorded at 41.1m, and correlates with fault at M.L. 14, 56.4m Drilled on Aberfoyle section 2350'E.

SURVEY			From - To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	027°	-45°	0			2548.5		59.7
			84.4	84.4	59.7	2488.8		

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	48.8	57.9	6.6 (true)	Trace													

RENISON LIMITED - DRILL CORE RECORD

506092 091

HOLE NUMBER	M.L. 14
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2529.9m (1943')
CO-ORDINATES	32264.5mN (2114'N) 10737.9mE (2465'E)
LENGTH	90.4m (297')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	No core available. Tin assays complete over ore zone No log available. Fault recorded at 56.4m and correlates with fault in M.L. 13 at 41.1m. Hole not surveyed. Fault dip 55° south. Fault possibly displaced part of Lode.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos	Prog. Total
	R.M.G.							
0	027°	-45°	0			2529.9		
			90.4	90.4	63.9	2466.0		63.9

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
"LODE BEDS"	37.8	51.8	10.7 (true)	0.12													
			12.0m. (true)														

RENISON LIMITED – DRILL CORE RECORD

092

506093

HOLE NUMBER	M.L. 15
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2504.3 m (1856′)
CO-ORDINATES	32306.7mN 10789.2m
LENGTH	92.1m (302′)
HOLE SIZE	
DATE DRILLED	Summer 1964 – 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. K. Couper
COMMENTS	Renison has some core from 53.0m (174′) to 92.0m (302′), but with lots missing. Intervals, 65.2 to 66.1m; 68.9 to 70.4m were split by Aberfoyle. No log is available, nor complete assays. Hole not surveyed. Either drilled with dip of lode or in the fault gap. e.g. Holes 13, 14 hit fault.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	207°	-45	0			2504.3		
			92.1	92.1	65.1	2439.2		65.1

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	16.[illegible]	16.5		Trace													
	22.[illegible]	24.5		Trace													
	26.0	29.0		Trace													
	68.9	70.6		Trace													

RENISON LIMITED - DRILL CORE RECORD

506094

093

HOLE NUMBER	M.L. 16
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2510.1 m. (1876')
CO-ORDINATES	32233.6mN (2055'N) 10763.8mE (2590'E)
LENGTH	65.8m (216')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. K. Couper
COMMENTS	Renison has core from 28.0m (92') to 65.8 (216'), with minor amount missimg. Assays are incomplete and some core, which was not split, was found to contain tin. Hole not surveyed. Complete log not available.

SURVEY			From - To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Log. Total
	R.M.G.							
0	067°	-55°	0			2510.1		
			65.8	65.8	53.9	2456.2		37.7

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				
"Lode Beds"	28.1	57.2															
	28.5	38.1	4.9 (true)	0.05													
Renison Assays	28.3	56.7	19.9m (true)	0.26	0.12	0.11	<0.10	21.8				<0.01					

RENISON LIMITED - DRILL CORE RECORD

HOLE NUMBER	M.L. 17
PURPOSE	To test MAIN LODE (Zone 4.)
LOCATION	
COLLAR R.L.	2492 m } estimated (1735')
CO-ORDINATES	32,205N 10,793E (2030'N 2722'E)
LENGTH	70.7m (232')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	Renison has core from 16.5m (54') to 27.7m (91') and from 48.8m (160') to 65.5m (215'), although lots of these intervals are missing. Hole not surveyed. No log available.

SURVEY			From - To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.MG.							
0	067°	-57°	0			2480.		
			70.7	70.7	59.3	242 .		38.5

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A.
"Lode Beds"	19.0	45.3	19m ETT	ASSAYING INCOMPLETE BUT PROBABLY < 0.1% Sn.													
	27.9	36.9	4.3m(true)	0.12													

RENISON LIMITED - DRILL CORE RECORD

506096

095

HOLE NUMBER	M.L. 18
PURPOSE	To test MAIN LODE (Zone 4).
LOCATION	
COLLAR R.L.	(1693')
CO-ORDINATES	2055'N 2919'E 2447m } estimated 32,183N 10,848E
LENGTH	51.5m (169')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	Renison has core from 3.1m (10') to 51.5m (169'); however some core is missing. No log is available. Assays are incomplete. Hole not surveyed.

SURVEY					VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	From – To	Distance D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	R.M.G.							
0	224½°	–45°	0			2450.0		
			51.5	51.5	36.4	2413.6		36.4

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A
"Lode Beds	6.2	43.0															
	9.4	21.6	8.2m(true)	0.15													
	33.8	40.8	4.9m(true)	0.18													
Renison Assay	7.3	42.4	28.8m(true)	0.24	0.04	0.15	<0.10	35.8				<0.01					

RENISON LIMITED – DIAMOND DRILL RECORD

506097

096

HOLE NUMBER	ML 19
PURPOSE	
LOCATION	Mt.Lindsay
COLLAR R.L.	2473.2
CO-ORDINATES	31692.9N 11059.5E
LENGTH	66.6m
HOLE SIZE	EX
COMMENCED	26-1-64
COMPLETED	6-2-64
SIGNIFICANT CORE LOSS ZONES	Recovery 98%
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J.Couper, J.L.Morton
COMMENTS	

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
						2473.2		
	R.M.G.		0. 66.6	66.6	47.1	2426.1	47.1	47.1
	47°	-45°						

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

												Sn - Rec.	Cu - Rec	Carb	Silic	S G

RENISON LIMITED — DIAMOND DRILL RECORD

506098 097

HOLE NUMBER	20
PURPOSE	
LOCATION	Mt. Lindsay
COLLAR R.L.	2476.1
CO-ORDINATES	31669.7 N 11078.6 E
LENGTH	91.9m
HOLE SIZE	EX
COMMENCED	2-12-63
COMPLETED	
SIGNIFICANT CORE LOSS ZONES	Recovery 98%
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A.McGain, J.L.Morton
COMMENTS	

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M.G.					2476.1		
	47°	-45°			65.1	2411.0	65.1	65.1

SUMMARY — ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

RENISON LIMITED – DIAMOND DRILL RECORD

500099 098

HOLE NUMBER	ML 21
PURPOSE	
LOCATION	Mt. Lindsay
COLLAR R.L.	2474.8
CO-ORDINATES	31647.4 N 11097.5 E
LENGTH	64.3m
HOLE SIZE	EX
COMMENCED	
COMPLETED	24-1-64
SIGNIFICANT CORE LOSS ZONES	Recovery 95.5%
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
		-45°				2474.8		
	47°		0 - 64.3	64.3	45.5	2429.3	45.5	45.5
	(R.M.G.)							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

LODE NAME	FROM	TO	Sn	Cu	As	S	Cu F$_e$	Ag.	Bi		Sn - Rec.	Cu - Rec.	Carb	Silic.	S.G.

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	ML 22
PURPOSE	
LOCATION	Mt. Lindsay
COLLAR R.L.	2471.3
CO-ORDINATES	31628.4 N 11130.4 E
LENGTH	70.3 m
HOLE SIZE	EX
COMMENCED	
COMPLETED	7-3-64
SIGNIFICANT CORE LOSS ZONES	Reovery [illegible]
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A.McGain
COMMENTS	

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	47°	-45°				2471.3		
	R.H.G.		0 - 70.3	70.3	49.8	2421.5	49.8	49.8

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

LODE NAME	FROM	TO	Sn.	Cu.	As.	S	CaF_2	Ag.	Bi		Sn - Rec.	Cu - Rec.	Carb.	Silic.	S.G.

506100

RENISON LIMITED — DIAMOND DRILL RECORD

HOLE NUMBER	ML 29	SURVEY			From —	Distance	VERTICAL		HORIZONTAL	
		[illegible]	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
PURPOSE	No 1 Anomaly.			-45°				2449·3		57·1m
			47°		0- 80·8	80·8	57·1	2392·2.		
			Renison Mine Grid.							
LOCATION	Mt.Lindsay									
COLLAR R.L.	2449.3									
CO-ORDINATES	31543.9 N 11161.9 E									
LENGTH	80.8m									
HOLE SIZE	EX									
COMMENCED										
COMPLETED	20-3-64									
SIGNIFICANT CORE LOSS ZONES	Recovery 93.7%									
ORE ZONE GROUND CONDITIONS										
LOGGED BY	J.K.Couper									
COMMENTS										

SUMMARY — ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

RENISON LIMITED - DRILL CORE RECORD

506102 101

HOLE NUMBER	M.L. 30
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2577.6m (2112.5')
CO-ORDINATES	32273.5mN (1913'N) 13598.2mE (2050'E)
LENGTH	170.7m (560')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	J. K. Couper
COMMENTS	Renison has core from 86.9m (285') to 169.8 (557') Hole not surveyed. Assays not complete. Fault recorded at 78.6m, correlates with fault in M.L 9, and in No 1 West X-Cut.

SURVEY					VERTICAL		HORIZONTAL	
Depth	Bearing	I	From – To	Distance D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0	027°	-60°	0			2577.6		
	R.M.G		170.7	170.7	147.8	2429.6		85.4

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.
LODE BEDS	92.4	167.0															
	114.0	116.8	1.8m(true)	0.33													
	129.1	137.2	4.3m(true)	0.15													
Renison Assays.	103.6	106.7 see log.															

HOLE NUMBER	M.L. 31
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2536.4 (1963')
CO-ORDINATES	32378.8mN (2438'N) 10736.3mE (2277'E)
LENGTH	213.1m (699')
HOLE SIZE	
DATE DRILLED	Summer 1964 – 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	Hole abandoned at 213.1m, after drilling 44.8m of lode material due to unavailability of rods. Renison has complete hole, Complete assays of split sections not available.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0	207°	-50°	0			2536.4		
	R.M.G.		213.1	213.1	163.2	2373.2		137.0

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
LODE BEDS	168.2	213.1															
	208.0	211.8	1.5m(true)	0.15													
RENISON ASSAYS	192.3	212.1	19.8 m down hole.	0.29	0.25	0.05	0.17	31.9				0.01					

RENISON LIMITED - DRILL CORE RECORD

506104 103

HOLE NUMBER	L. 32
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2467.4m (1737')
CO-ORDINATES	32033.7mN (1679'N) 10876.9mE (3233'E)
LENGTH	118.9m (390')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	Hole not surveyed. No log available. Assays are incomplete Renison has core from 0 - 118.9m.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0	027°	-55°	0			2467.4		
	R.M.G.		118.9	118.9	97.4	2370.0		68.2

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO3	Ag g/t				
LODE BEDS	84.9	106.0	21.1m														
	[illegible]		[illegible] 15m														
	95.1	99.1	2.4m(true)	0.22													
RENISON REASSAY	82.9	110.6	27.7m	0.32	0.12	0.07	<0.10	18.6				<0.01					
			down hole														

RENISON LIMITED - DRILL CORE RECORD

506105

HOLE NUMBER	M.L. 33
PURPOSE	To test MAIN LODE
LOCATION	
COLLAR R.L.	2482.2m (1781')
CO-ORDINATES	31996.8mN (1636'N) 10916.4mE (3407'E)
LENGTH	134.1m (440')
HOLE SIZE	
DATE DRILLED	Summer 1964 - 1965
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	
COMMENTS	Renison has core from 0 - 134.1m Hole not surveyed. Assays are incomplete.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	Cos.Dip	Prog. Total
0	027°	-62°	0			2482.2		
	R.M.G.		134.1	134.1	118.4	2363.8	63.0	63.0

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A
LODE BEDS	110.3	126.5		Trace													
RENISON ASSAY	113.1	126.5	13.4 down hole	0.29	0.11	0.10	0.91	27.0				0.25					
including	113.1	125.3	12.2m down hole	0.30	0.13	0.10	0.93	27.9				0.27					

RENISON LIMITED — DIAMOND DRILL RECORD

HOLE NUMBER	M.L. 34
PURPOSE	To test strong I.P. conductivity anomaly coincident with magnetic and arsenic anomalies.
LOCATION	MT. LINDSAY E.L. 18/73
COLLAR R.L.	2201.3
CO-ORDINATES	30908.5 N 9410.0 E
LENGTH	340m
HOLE SIZE	0 - 99 NQ 99 - 340 BQ
COMMENCED	4-12-75
COMPLETED	18-12-75
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS
COMMENTS	Drilled with 10L. 15m NW casing left between 84m and 99m. HW cased to 72m.

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
		R.M.G.				2201.3		
0	44.2°	- 46.8°	0-11	11	8.0	2193.3	7.5	7.5
22.5	44.4	- 48	11-34	23	17.1	2176.2	15.4	22.9
46.5	43.8	- 51½	34-58	24	18.8	2157.4	14.9	37.8
70.5	43.1	- 52	58-82	24	18.9	2138.5	14.8	52.6
94.5	42.5	- 53	82-106	24	19.2	2119.3	14.4	67.0
118.5	41.9	- 51	106-130	24	18.7	2100.6	15.1	82.1
142.5	41.2	- 46	130-154	24	17.3	2083.3	16.7	98.8
166.5	40.6	- 45	154-178	24	17.0	2066.3	17.0	115.8
190.5	40.0	- 43½	178-202	24	16.5	2049.8	17.4	133.2
214.5	39.3	- 42½	202-226	24	16.2	2033.6	17.7	150.9
238.5	38.7	- 40	226-250	24	15.4	2018.2	18.4	169.3
262.5	38.1	- 40	250-274	24	15.4	2002.8	18.4	187.7
286.5	37.4	- 37½	274-298	24	14.6	1983.2	19.0	206.7
310.5	36.8	- 36	298-316	18	10.6	1977.6	14.6	221.3
322.5	36.5	- 35	316-330	14	8.0	1969.6	11.5	232.8
340.	36.0	-34½	330-340	10	5.9	1963.7	8.7	241.5

SUMMARY — ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

506106

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	M.L. 35
PURPOSE	To test Main Lode
LOCATION	MT. LINDSAY
COLLAR R.L.	2466.1
CO-ORDINATES	32026.7 N 10684.1 E
LENGTH	282 m
HOLE SIZE	0-69 NQ 69-282 BQ
COMMENCED	7-1-76
COMPLETED	22-1-76
SIGNIFICANT CORE LOSS ZONES	*Some core lost in broken zone from 195 – 209m.*
ORE ZONE GROUND CONDITIONS	*H.W. Rocks very broken*
LOGGED BY	A. Ross
COMMENTS	Drilled with 10L. Hit water between 185 - 210m and at granite contact. Cave in at 190m. HW cased to 57m.

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M.G.					2466.1		
0	43.2°	-51°	0 -15	15	11.7	2454.4	9.4	9.4
30	43.0	-54°	42	27	21.8	2432.6	15.9	25.3
54	42.7	-52½°	66	24	19.0	2413.6	14.6	39.9
78	42.4	-52½°	90	24	19.0	2394.6	14.6	54.5
102	42.1	-52°	114	24	18.9	2375.7	14.8	69.3
126	41.8	-51°	138	24	18.7	2357.0	15.1	84.4
150	41.5	-50°	162	24	18.4	2338.6	15.4	99.8
174	41.2	-50°	183	21	16.1	2322.5	13.5	113.3
192	41.0	-50°	202	19	14.6	2307.9	12.2	125.5
216	40.7	-50°	282	80	61.3	2246.6	51.4	176.9

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS								
				Sn.	Cu.	As.	S.	Pb	Zn	Bi	Mo	WO_3
MAIN ORE ZONE	*198.0m*	*210.0m*	*12.0m.*	0.26	0.086	0.23	2·81	0.002	0.010	0.03	0.002	0.03
		Estimated True Thickness	*9.0m.*	Approx	0.18+	Acid Soluble S...						

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

											S Rec	Cu Rec	Carb	Silic	S G

506107

RENISON LIMITED — DIAMOND DRILL RECORD

HOLE NUMBER	ML 36
PURPOSE	To test Main Lode.
LOCATION	MT. LINDSAY
COLLAR R.L.	2429.5
CO-ORDINATES	31748.5 N 10947.2 E
LENGTH	439m
HOLE SIZE	0 - 66 NQ 66 - 439 BQ
COMMENCED	25-1-76
COMPLETED	20-2-76
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS
COMMENTS	Drilled with 10L. Making water from 351m. By end of hole, water flowing ½m out of rods. Hole caved in from 40m when casing pulled.

SURVEY			From —	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M.G.					2429.5		
0	40.5°	- 51°	0-9	9	7.0	2412.5	5.7	5.7
19	40.3	- 52½	9-31	22	17.5	2405.0	13.4	19.1
43	39.7	- 54	31-55	24	19.4	2385.6	14.1	33.2
67	38.8	- 55	55-79	24	19.7	2365.9	13.8	47.0
91	38.2	- 54	79-103	24	19.4	2346.5	14.1	61.2
115	37.9	- 54	103-127	24	19.4	2327.1	14.1	75.2
139	36.7	- 53	127-151	24	19.2	2307.9	14.4	89.6
163	36.1	- 52	151-175	24	18.9	2289.0	14.8	104.4
187	35.1	- 52	175-199	24	18.9	2270.1	14.8	119.2
211	34.5	- 51	199-223	24	18.7	2251.4	15.1	134.3
235	33.8	- 50	223-244	21	16.1	2235.3	13.5	147.8
253	33.3	- 47½	244-265	21	15.5	2219.8	14.2	162.0
277	32.4	- 47	265-289	24	17.6	2202.2	16.4	178.4
295	32.0	- 47	289-311	22	16.1	2186.1	15.0	193.4
330	30.9	- 45½	311-348	37	26.4	2159.7	25.9	219.3
336	26.9	- 45	348-375	27	19.1	2140.6	19.1	238.4
384	24.4	- 45	375-393	18	12.7	2127.9	12.7	251.1
402	21.9	- 43	393-411	18	12.3	2115.6	13.2	264.3
420	19.4	- 44	411-425	14	9.7	2105.9	10.1	274.4
431	16.9	- 45	425-439	14	9.9	2096.0	9.9	284.3

SUMMARY — ASSAY DATA

	LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS Sn.	Cu.	As.	S.	Pb	Zn	Mo	Bi	WO_3	Sol. Sn.
	MAIN LODE	272	316.5	44.5 m.	Generally a weakly mineralized carbonate horizon, with mineralization best									
		Estimated True Thickness		40.0 m	developed from 306-312m.									
containing		304.0	314.0	10. m	0.27	<0.05	0.04	4.8			0.002	0.008	0.04	
		Estimated True Thickness		9.0 m.										
OR		304.0	307.0	3.0m	0.70	<0.05	0.01	10.5	0.004	0.005	0.001	0.008	0.03	0.004
		Estimated True Thickness		2.7m.										

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

5061008

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	M.L. 37
PURPOSE	To test No.2 Anomaly
LOCATION	MT. LINDSAY
COLLAR R.L.	2464.3
CO-ORDINATES	31752.9 N 11204.2 E
LENGTH	349.5 m
HOLE SIZE	0 – 69 NQ 69 – 349.5 BQ
COMMENCED	14-1-76
COMPLETED	9-2-76
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS
COMMENTS	Drilled with F30 Truck Mounted Rig. HQ cased to 55m.

SURVEY Depth	SURVEY Bearing	SURVEY Dip	From – To	Distance D	VERTICAL D. Sin Dip	VERTICAL R.L.	HORIZONTAL D. Cos Dip	HORIZONTAL Prog. Total
	R.M.G.					2464.3		
0	40° (?)	-45	0-22	22	15.6	2448.7	15.6	15.6
45	–	-46	57	35	25.2	2423.5	24.3	39.9
69	–	-44	81	24	16.7	2406.8	17.3	57.2
93	38.9	-43	129	48	32.7	2374.1	35.1	92.3
165	36.9	-40	174	45	28.9	2345.2	34.5	126.8
183	–	-40	195	21	13.5	2331.7	16.1	142.9
207	–	-40	225	30	19.3	23 2.4	23.0	165.9
243	–	-38	252	27	16.6	2295.8	21.3	187.2
261	–	-37	279	27	16.2	2279.6	21.6	208.8
297	–	-38	306	27	16.6	2263.0	21.3	230.1
315	36.9	-38	324	18	11.1	2251.9	14.2	244.3
333	41.9	-38	339	15	9.2	2242.7	11.8	256.1
345	44.9	-38	350	11	6.8	2235.9	8.7	264.8

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	Sn.	Cu.	As.	Sol Sn	Bi	Mo	WO_3	Pb	Zn
No. 2 ANOMALY	268.4	303	34.6m.									
Values over the full mineralised zone were generally low, but there were two intervals with above average Sn and WO_3 values.												
"H.W. Tin Zone"	278.0	277.0	7.0m.	0.13	<0.01	<0.01	0.066	<0.01	<0.01	<0.01		
	Estimated True Thickness		6.0m.									
"F.W. Tungsten Zone"	291.0m	296.0m	5.0m	0.05	0.05	0.49	[illegible].036	0.033	<0.01	0.21	0.003	0.014
	Estimated True Thickness		4.5m									

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

509109

RENISON LIMITED - DRILL CORE RECORD

506110 109

HOLE NUMBER	M.L. 38
PURPOSE	To test strong magnetic and arsenic anomalies along strike from mine area.
LOCATION	Mt. Lindsay.
COLLAR R.L.	2355.6
CO-ORDINATES	31282.4N 11472.7E
LENGTH	408.5m
HOLE SIZE	0 - 12 NQ 12 - 408.5 BQ
DATE DRILLED	12.2.76 - 8/3/76
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. Ross.
COMMENTS	Drilled with F30 truck mounted R16. No casing left in hole.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0	39°48'34"	- 48½	0 - 2.5	2.5	1.9	2353.7	1.6	1.6
5	- 38.2	- 50	- 13	10.5	8.0	2345.7	6.7	8.3
21	36.6	- 47	- 33	2.0	14.6	2331.1	13.6	21.9
45	35.8	- 46.5°	- 60	27	19.6	2311.5	18.6	40.5
75	34.7	- 46	- 90	30	21.6	2289.9	20.8	61.3
105	33.6	- 44	-117	27	18.7	2271.2	19.4	80.7
129	32.7	- 43.5	-141	24	16.5	2254.7	17.5	98.2
153	31.9	- 43	-165	24	16.3	2238.4	17.5	115.7
177	31.0	- 42	-189	24	16.1	2222.3	17.8	133.5
201	30.1	- 41	-213	24	15.7	2206.6	18.1	151.6
225	29.3	- 40.5	-249	36	23.4	2183.2	27.4	179.0
273	27.5	- 38	-282	33	20.3	2162.9	26.0	205.0
291	26.9	- 36.5	-303	21	12.5	2150.4	16.8	221.8
315	-	- 36	-327	24	14.1	2136.3	19.4	241.2
339	-	- 35.5	-351	24	13.9	2122.4	19.5	260.7
363	-	- 35	-372	21	12.0	2110.4	17.2	277.9
381	-	- 35	-390	18	10.3	2110.1	14.7	292.6
399	27.9	- 35	-402	12	6.9	2093.2	9.8	302.4
405	-	- 35	406.5	4.5	2.6	2090.6	3.7	306.1
408	-	- 35	-408.5	2	1.1	2089.5	1.6	307.7
	Q. M. G.							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t	Mo			
	353m	378m	25m	0.79	0.008	0.16	0.20	1.59			0.02	0.04		0.001			
	Estimated true thickness 23m.																
	353	369	16.0m	1.10	0.01	0.12	0.21	1.26			0.014	0.05		0.001			
	Estimated true thickness 14.5m																

RENISON LIMITED – DIAMOND DRILL RECORD

		SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
HOLE NUMBER	ML 39	Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
PURPOSE	To test IP, magnetic and As geochemical anomolies.	0	232°33'37"	-48°43'				2411.1		
		12	-	-48	0 - 12	12	8.92	2402.2	8,03	8.0
		24	-	-45	12 - 42	30	21.21	2381.0	21.21	29.2
LOCATION	Mt. Lindsay E.L. 18/73	48	-	-44	42 - 54	12	8.34	2372.7	8.63	37.9
		60	-	-45	54 - 66	12	8.49	2364.2	8.49	46.4
COLLAR R.L.	2411.1	72	234	-44	66 - 78	12	8.34	2355.9	8.63	55.0
		108	234	-43	78 - 114	36	24.55	2331.3	26.33	81.3
CO-ORDINATES	31638.0 N 10272.4 E	120	235	-42½	114-126	12	8.11	2323.2	8.85	90.2
		132	237	-42	126-138	12	8.03	2315.2	8.92	99.1
LENGTH	337.1m	144	-	-41	138-150	12	7.87	2307.3	9.06	108.2
		156	-	-40	150-162	12	7.71	2299.6	9.19	117.3
HOLE SIZE	0-66 NQ 66-337.1 BQ	168	-	-40	162-174	12	7.71	2291.9	9.19	126.5
		180	241	-39	174-186	12	7.55	2284.3	9.33	135.9
COMMENCED	26-11-76	192	-	-39	186-198	12	7.55	2276.7	9.33	145.2
		204	241	-37	198.210	12	7.22	2269.5	9.58	154.8
COMPLETED	5-1-77	216	247	-39	210-222	12	7.55	2262.0	9.33	164.1
		228	-	-38½	222-234	12	7.47	2254.5	9.39	173.5
SIGNIFICANT CORE LOSS ZONES		240	-	-38½	234-246	12	7.47	2247.0	9.39	182.9
		252	-	-39	246-258	12	7.55	2239.5	9.33	192.2
ORE ZONE GROUND CONDITIONS		264	-	-38	258-272	14	8.62	2232.8	11.03	203.2
		276	-	-38	272-337	65	40.0	2190.8	51.22	254.5
LOGGED BY	A. Ross.	337.1	-	-						
			R.M.G.							

COMMENTS	Two carbonate-rich horizons intersected, with traces of pyrrhotite but barren with respect to tin. Strongly magnetic greywacke/siltstone horizon from 219 to 259m probably explains magnetic anomaly. Disseminated pyrrhotite may explain I.P. anomaly.

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.	WO_3			
CARBONATE HORIZON	141.2	165.1	20m (true)	<0.1	0.05	<0.01		<0.01			
CARBONATE HORIZON	289.4	313.4	21m (true)	<0.1 (TIN CORE ANALYSER)							

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

LODE NAME	FROM	TO	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		Sn. Rec.	Cu. R.	Carb.	[illegible]	S.C.

506111

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	ML 40
PURPOSE	To test sequence along strike from D.D.H. 38
LOCATION	MT. LINDSAY EL 2/63
COLLAR R.L.	2321.3
CO-ORDINATES	31042.4 N 11506.4 E
LENGTH	550.1m
HOLE SIZE	0-81.1 NQ 81.1-550.1 BQ
COMMENCED	11/1/77
COMPLETED	14/2/77
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS.
COMMENTS	Intersected major barren carbonate-rich horizon from 418 to 454m. Other carbonate-chert horizons intersected.

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M.G.					2321.3		
0	41° 40' 03"	-45° 39'	0-70	70	49.92	2271.4	49.06	49.1
140	042	-44°	70-167	97	67.38	2204.0	69.78	118.8
194		-41°	167-221	54	35.43	2168.6	40.75	159.6
248	042	-38°	221-275	54	33.25	2135.3	42.55	202.1
302		-35°	275-329	54	30.97	2104.3	44.23	246.4
356		-32½°	329-383	54	29.01	2075.3	45.54	291.9
410	39°	-31°	383-437	54	27.81	2047.5	46.29	338.2
464		-28°	437-483	46	21.60	2025.9	40.61	378.8
502	036	-27½°	483-526	43	19.86	2006.0	38.14	417.0
550	033½	-28°	526-550	24	11.27	1994.7	21.19	438.1

Bearings affected by magnetite

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				
NO. 2. ANOMALY CARBONATE HOR.	418	454	52 (true)	<0.1 (SN CORE ANALYSER)							
CARBONATE HORIZON	92	124	23 (true)	<0.1							
CARBONATE HORIZON	247	257	10 (true)	<0.1							

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	ML41
PURPOSE	To test sequence between D.D.H 37 & D.D.H. 38
LOCATION	MT. LINDSAY EL 2/63
COLLAR R.L.	2394.2
CO-ORDINATES	31548.7N 11352.2E
LENGTH	392m
HOLE SIZE	0-29 NQ 29-392 BQ
COMMENCED	26/11/76
COMPLETED	20/1/77
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS.
COMMENTS	Intersected magnetite skarn, completely replacing No. 2. Anomaly horizon, from 270.5 to 326.

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M.G					2394.2		
	[illegible]		0-2	2	1.43	2392.8	1.4018	1.40
0	40	-45½	2-20	18	12.84	2380.0	12.6164	14.02
4	–	-46½	20-63	43	31.19	2348.8	29.5993	43.62
36	–	-47½	63-140	77	55.39	2293.4	53.4887	97.11
90	41	-46	140-214	74	52.33	2241.1	52.3259	149.44
190	34°	-45	214-263	49	34.34	2206.8	34.9493	184.39
238	–	-44½	263-313	50	35.05	2171.7	35.6625	220.05
288	–	-44½	313-364	51	35.11	2136.6	36.9941	257.04
339	–	-43½	364-392	28	19.10	2117.5	20.4779	277.52
390	–	-43						
Bearings affected by magnetite.								

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.	WO_3	TOTAL Fe	Sol Sn	
No. 2. ANOMALY SKARN HORIZON	270.5	326	55.5 (44 true)	0.17	<0.1	<0.1		<0.01	35	0.047	
including	291	298	7	0.36	<0.1	<0.1		<0.01	36	0.020	

SUMMARY METALLURGICAL DATA COMPOSITE SAMPLE

50113

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	ML 42
PURPOSE	To test sequence along strike from D.D.H. 38
LOCATION	MT. LINDSAY EL 2/63
COLLAR R.L.	2301.6m
CO-ORDINATES	30915.9 N 11653.6 E
LENGTH	460m
HOLE SIZE	0-69 NQ 69-460BQ
COMMENCED	23-1-77
COMPLETED	15-2-77
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS
COMMENTS	Intersected major barren carbonate rich horizon from 348 to 402m. Similar sequence to D.D.H. 40. Other barren carbonate chert horizons intersected.

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. C.	Prog. Total
	R.M.G.					2301.6		
0	39° 30' 16"	-44° 29'	0-47	47	32.94	2268.7	33.52	33.5
94		-46½	47-118	71	51.50	2217.2	48.87	82.4
142		-44½	118-169	51	35.75	2181.4	36.38	118.8
196		-39	169-223	54	34.00	2147.4	42.00	160.8
250		-36	223-274	51	30.00	2117.4	41.26	202.1
298		-35	274-325	51	29.25	2088.1	41.78	243.9
352		-34½	325-379	54	30.59	2057.4	44.50	288.4
406	035	-34	379-433	54	30.20	2027.3	44.77	333.2
460		-33½	433-460	27	14.90	2012.4	22.51	355.7

Bearings affected by magnetite

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				
No. 2. ANOMALY CARBONATE HORIZON	348	402	50 (true)	<0·1 (TIN CORE ANALYSED)							
CARBONATE HORIZON	68	94	26 (true)	<0·1	No1 ANOMALY						
CARBONATE HORIZON	193	202	11 (true)	<0·1	MAIN LODE						

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

												Sn Rec.	Cu - Rec	Carb	Silic	S.G

50614

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	ML 43
PURPOSE	To test Main Lode at old Mt. Lindsay Mine workings.
LOCATION	MT. LINDSAY EL 2/63
COLLAR R.L.	2442.4
CO-ORDINATES	31966.6 N 10851.4 E
LENGTH	257m
HOLE SIZE	0–15 NQ 15–257 BQ
COMMENCED	17-2-77
COMPLETED	2-3-77
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS.

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip	To	D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M.G					2442.4		
0	030°	-61¾°	0-40	40	35.2	2407.2	18.9	18.9
83	027½°	-61°	40-108	68	59.5	2347.7	33.0	51.9
130	023°	-58¼°	108-152	44	37.4	2310.3	23.2	75.1
195	009°	-52°	152-226	74	58.3	2252.0	45.6	120.7
257	012°	-50¾°	226-257	31	24.0	2228.0	19.6	140.3

COMMENTS

Failed to intersect mineralisation.

Chert horizon with trace pyrrhotite intersected from 15 to 52m. (No. 1 Anomaly R.S.).

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

LODE NAME	FROM	TO	Sn	Cu	As	S	CaF_2	Ag	Bi		Sn - Rec	Cu - Rec	Carb	Silic.	S.G

50115

RENISON LIMITED – DIAMOND DRILL RECORD

HOLE NUMBER	ML 44
PURPOSE	*To test sequence above D.D.H. 38.*
LOCATION	MT. LINDSAY EL 2/63
COLLAR R.L.	2326.7
CO-ORDINATES	31441.0 N 11542.3 E
LENGTH	349.4m
HOLE SIZE	0–88 NQ 88–349.4 BQ
COMMENCED	18-2-77
COMPLETED	8-3-77
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. ROSS.
COMMENTS	*Intersected barren carbonate from 43 to 122m; correlated with major barren carbonate horizons previously intersected in D.D.H's 38,40,42.*

SURVEY			From –	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D. Sin Dip	R.L.	D. Cos Dip	Prog. Total
	R.M. G					2326.7		
0	039°	-49	0–50	50	38.0	2288.7	32.5	32.5
100		-49¼	50–126	76	57.6	2231.1	49.6	82.1
153		-47¼	126–176	50	36.7	2194.4	33.9	116.0
202	040	-45¾	176–226	50	35.8	2158.6	34.9	150.9
251		-44¼	226–276	50	34.9	2123.7	35.8	186.7
300		-43¾	276–326	50	34.6	2089.1	36.1	222.8
349.4		-42½	326–349	23	15.5	2073.6	17.0	239.8

Bearings affected by magnetite

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m.)	AVERAGE WEIGHTED ASSAYS							
				Sn.	Cu.	As.	S.				
NO. 2. ANOMALY CARBONATE HORIZON	43	122	51 (true)	<0.1 (TIN CORE ANALYSER)							

SUMMARY METALLURGICAL DATA   COMPOSITE SAMPLE

LODE NAME																	

506116

RENISON LIMITED - DRILL CORE RECORD

506117 116

HOLE NUMBER	M.L. 45
PURPOSE	To test mineralisation beneath M.L. 40
LOCATION	Mt. Lindsay
COLLAR R.L.	2316.5 m
CO-ORDINATES	30989.3 m N 11,459.0 m E
LENGTH	648.5m
HOLE SIZE	Nq 0 - 94.5m Bq 94.5 - 648.5m
DATE DRILLED	15th December 1977
SIGNIFICANT CORE LOSS ZONES	12th January 1978
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R.R. Schellekens
COMMENTS	No 2 Carbonate – carbonate, minor calc-silicate bands.

	SURVEY					VERTICAL		HORIZONTAL	
	Depth	Bearing	Dip	From – To	Distance D	D.Sin.	R.L.	D.Cos.Dip	Prog. Total
	0	41°47′47″	-65°6′17″	0 - 25.5	25.5	23.1	2293.4	10.8	10.8
Casing effects	51.0		-65°	- 75.0	49.5	44.9	2248.5	20.9	31.7
Casing effects	99.0	37°	-63°	-123.0	48.0	42.1	2205.8	21.8	53.5
	147.0	37½°	-61¼°	-171.0	48.0	42.1	2163.7	23.1	76.6
	195.0	38°	-61½°	-219.0	48.0	42.2	2121.5	22.9	99.5
Magnetic Shales	243.0	* 43°	-61¾°	-267.0	48.0	42.3	2079.2	22.7	122.2
	291.0	38°	-62½°	-320.5	53.5	47.4	2031.8	24.7	146.9
	350.0	39°	-62½°	-375.5	55.0	48.8	1983.0	25.4	172.3
	401.0	40°	-62½°	-426.5	51.0	45.2	1937.8	23.5	195.8
Magnetic Shales	452.0	* 44°	-62°	-473.5	47.0	41.5	1896.3	22.1	217.9
	495.0	35°	-60¾°	-514.5	41.0	35.8	1860.5	20.0	237.9
	534.0	37°	-61¼°	-575	60.5	53.0	1807.5	29.1	267.0
	616.0	38°	-59¾°	-630	55.0	47.5	1760.0	27.7	294.7
	644.0	39°	-60°	-648.5	18.5	16.0	1744.0	9.25	303.9
		R.M.G.							
		* Possible Magnetic effects							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No2 CARBONATE	460.2	567.5	107.3	< 0.01	0.011	< 0.05	< 0.10	6.1	0.004	0.006	0.007	< 0.01	6				
	567.2	568.2	1.0	< 0.01	0.016	< 0.05	< 0.10	8.9	0.003	0009	0.004	0.16	2.				

RENISON LIMITED - DRILL CORE RECORD

506118 117

HOLE NUMBER	M.L. 46 + M.L. 46A (wedge)
PURPOSE	To test mineralisation beneath M.L. 38
LOCATION	Mt Lindsay, Tasmania
COLLAR R.L.	2321.3m
CO-ORDINATES	31147.4mN, 11407.1mE
LENGTH	M.L. 46 627.0m M.L. 46A 570.2 - 632.1m
HOLE SIZE	Pq 0 - 3.0 Nq 47.8 - 69.1 Hq 3.0 - 47.8 Bq 69.1 - 632.1
DATE DRILLED	14th January - 1st March, 1978
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	Calc-silicate ground conditions good. Poor ground at fault approximately 4m wide.
LOGGED BY	R.R. Schellekens
COMMENTS	Hole abandoned at 45m due to gear stuck in hole (broken rod). Site moved and hole redrilled. Fault encountered at 627.0m. Unable to penetrate. Hole cemented several times and wedged at 570.2m. Hole finally abandoned at 632.1m after penetrating fault and having to pull back for bit change. Unable to get back through fault zone.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0m	42°(?)	-54°	0 - 15.0	15.0	12.1	2309.2	8.8	8.8
30.0m	** 3°(mine)	-55°	- 55.0	40.0	32.8	2276.4	22.9	31.7
80.0m	**27°	-52°15'	- 107.5	52.5	41.5	2234.9	32.1	63.8
135.0m	**51°	-54°45'	- 167.75	60.25	49.2	2187.6	37.3	101.1
200.5m	39½°	-52°	- 220.25	52.5	41.4	2146.2	32.3	133.4
240.0m	**-50°	-50°	- 277.55	57.3	43.9	2102.3	36.8	170.2
315.1m	**37°	-53°	- 332,6	55.05	44.0	2058.3	33.1	203.3
350.1m	40°	-53°	- 372.55	39.95	31.9	2026.4	24.0	227.3
395.0m	42°15'	-53°	- 422.3	49.75	39.7	1986.7	32.2	259.5
449.6m	**41°	-52°45'	- 475.55	53.25	42.4	1942.7	30.7	290.2
501.5m	**49°	-53°	- 526.55	51.0	40.7	1903.6	29.5	319.7
551.6m	41½°	-53°	- 576.05	49.5	39.5	1864.1	29.8	349.5
600.5m	**38°	-52°30'	- 609.50	33.45	26.5	1837.6	20.4	36 .9
618.5m	**42°30'	-51°15'	- 632.1	22.6	17.6	1822.3	14.1	384.0
	R. M. G.							
	** Probable Magnetic effects							

SUMMARY – ASSAY DATA

	LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
					Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				
M.L. 46	Carbonate and Calc-Silicates	578.6	624.6	46.0 (True width 29.6m)	<0.01	0.020	<0.05	<0.10	5.5	0.005	0.009	0.010	<0.01	5				
M.L. 46A	Carbonate and Calc-Silicates	580.4	625.2	44.8 (True width 29m)	<0.01	0.019	<0.05	<0.10	5.6	0.006	0.010	0.010	<0.01	7				

RENISON LIMITED - DRILL CORE RECORD

506119 118

HOLE NUMBER	ML 47
PURPOSE	TO TEST MINERALISATION UNDERNEATH M.L. 38
LOCATION	MT. LINDSAY TASMANIA
COLLAR R.L.	2433.8M
CO-ORDINATES	31700.0MN 11297.0M E
LENGTH	375.0M
HOLE SIZE	Pq 0-3.0m Nq 11.2 - 30.0m Hq 3.0 - 11.2m Bq 30.0 - 375.0m
DATE DRILLED	25.1.78 to 9.2.78
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R. SCHELLEKENS
COMMENTS	MAGNETITE SKARN ZONE INTERSECTED.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0m	43°48' 37"	-54°15'18"	0 - 24.8	24.8	20.1	2413.7	14.5	14.5
49.5m	*46°	-55°	- 75.5	50.7	41.5	2372.2	29.1	43.6
101.5m	45°	-55°	- 125.0	49.5	40.5	2331.7	28.4	72.0
148.5m	43°	-55.5°	- 174.0	49.0	40.4	2291.3	27.8	99.8
199.5m	*43°	-56.5°	- 224.0	50.0	41.7	2249.6	27.6	127.4
248.5m	? 24°	-58°	- 264.5	40.5	34.3	2215.3	21.5	148.9
280.5	? 1°	-58°	- 310.5	46.0	39.0	2176.3	24.4	173.3
340.5m	? 36°	-57°	- 356.75	46.25	38.8	2137.5	25.2	198.5
373.0m	*47°	-57°	- 375.0	18.25	15.3	2122.2	9.9	208.4
	R.M.G.							
	* Possible Magnetic effects							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No 2 CARBONATE	297.5	313.0	15.5	0.13	0.07	0.071	< 0.10	46.3	0.002	0.012	0.005	< 0.01	4				
	314.0	315.0	1.0	0.05	0.042	0.02	< 0.10	38.1	0.002	0.010	0.006	0.14	4				

RENISON LIMITED - DRILL CORE RECORD

506120 119

HOLE NUMBER	M.L. 48
PURPOSE	To test No1 Anomaly west of the Mt. Lindsay Spur.
LOCATION	Mt. Lindsay, Tasmania.
COLLAR R.L.	2528.1
CO-ORDINATES	32198.0mN 10213.6m E
LENGTH	339.5m
HOLE SIZE	Hq 0 - 24.5m Nq 24.5 - 41.0m Bq 41.0 - 339.5m
DATE DRILLED	16-2-78 to 28-2-78
SIGNIFICANT CORE LOSS ZONES	-
ORE ZONE GROUND CONDITIONS	Good
LOGGED BY	R. Schellekens.
COMMENTS	

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0m	38°09'42"	-43°35'12"	0-25.0	25.0	17.2	2510.9	18.1	18.1
50.0m	*43°	-45°15'.	-75.5	50.5	35.9	2475.0	35.6	53.7
101.0m	4°	-46°	-125.0	49.5	35.6	2439.4	34.4	88.1
149.0m	*26°	-46°30'	-174.5	49.5	35.9	2403.5	34.1	122.2
200.0m	46°	-46°	-225.5	51.0	36.7	2366.8	35.4	157.6
251.0m	*43°	-46°45'	-275.0	49.5	36.1	2330.7	33.9	191.5
299.0m	41°30'	46°15'	-318.5	43.5	31.4	2299.3	30.1	221.6
338.0m	44°	45°45'	-339.5	21.0	15.0	2284.3	14.7	235.3
* Possible magnetic effects.								
	R.M.G.							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No1 CARBONATE	131.9	134.9	3.0	0.12	0.085	< 0.05	0.33	19.4	0.002	0.018	0.019	< 0.01	3				50°
	137.9	147.9	10.0	0.	0.124	< 0.05	< 0.10	21.0	0.004	0.051	0.013	< 0.01	4				
	154.9	162.9	8.0	0.11	0.070	0.11	0.34	16.8	0.004	0.013	0.014	< 0.01	3				

RENISON LIMITED - DRILL CORE RECORD

506121 120

HOLE NUMBER	M.L. 49
PURPOSE	To test mineralisation beneath hole M.L. 41
LOCATION	Mt Lindsay, Tasmania
COLLAR R.L.	2404.5m
CO-ORDINATES	31482.2mN 11283.3mE
LENGTH	574.2m
HOLE SIZE	P 0 - 3.0m; Hq 3.0 - 21.0m; Nq 21.0 - 108.0m; Bq 108.0 - 574.2m
DATE DRILLED	7.3.78 to 20.3.78
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R.R. SCHELLEKENS
COMMENTS	Minor water at 250m (approximately) Core very broken below the No. 2 Carbonate intersection

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0m	44°26' 10"	-52°54'	0 - 25.25	25.25	20.2	2383.3	15.2	15.2
50.5m	* 355°	-52°45'	- 74.5	49.25	39.2	2344.1	29.8	45.0
98.5m	* 36°	-50°	- 120.25	45.75	35.0	2309.1	29.4	74.4
142.0m	39°	-50°	- 163.5	43.25	33.1	2276.0	27.8	102.2
185.0m	38°	-50°	- 207.5	44.0	33.7	2242.3	28.3	130.5
230.0m	39°	-49°	- 248.25	40.75	30.5	2211.8	26.7	157.2
266.5m	41°	-48°30'	- 281.5	33.25	24.9	2186.9	22.0	179.2
296.5m	* 31½°	-48°30'	- 317.5	36.0	27.0	2159.9	23.9	203.1
338.5m	* 38°	-49°15'	- 358.0	40.5	30.7	2129.2	26.4	229.5
377.5m	* 36°	-49°15'	- 400.0	42.0	31.8	2097.4	27.4	256.9
422.5m	* 30°	-50°	- 443.5	43.5	33.3	2064.1	28.0	284.9
464.5m	* 25°	-49°45'	- 479.5	36.0	27.5	2036.6	23.3	308.2
494.5m	40°	-49°45'	- 507.0	27.5	21.0	2015.6	17.8	326.0
519.5m	* 45°	-49°30'	- 542.5	35.5	27.0	1988.6	23.1	349.1
565.5m	34°	-49°45'	- 574.2	31.7	24.2	1964.4	20.5	369.6
	R.M.G.							
	* Magnetic or casing effects							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	Fe	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No 2 Carbonate	443.3	448.3	5.0	0.12	0.078	<0.05	<0.10	24.7	0.004	0.014	0.005	<0.01	3				40 -
	451.3	459.3	8.0	[illegible].12	0.078	<0.05	<0.10		0.004	0.013	0.005	<0.01	2				40 -
	467.3	478.3	11.0	0.15	0.081	<0.05	<0.10	21.5	0.005	0.012	0.009	<0.01	6				45°

RENISON LIMITED - DRILL CORE RECORD

506122 121

HOLE NUMBER	M.L. 50
PURPOSE	To test mineralisation - No. 2 Carbonate Between drill holes M.L. 38 and 49
LOCATION	MT LINDSAY TASMANIA
COLLAR R.L.	2379.7 m.
CO-ORDINATES	31448.7 m N 11407.5 m E
LENGTH	104.0 m
HOLE SIZE	Hq 0 - 36.0 m Nq 36.0 - 70.7 m Bq 70.7 - 104.0 m
DATE DRILLED	9th - 12th January 1979
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R. Schellekens
COMMENTS	Hole stopped due to excessive deviation in bearing in first 60 metres.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Dep	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0.0	42°32'58"	-62°54'	0 - 23.0	23.0	20.5	2359.2	10.4	10.4
46.0	-	-61°15'	- 61.0	38.0	33.3	2325.9	18.3	28.7
76.0	35°30'	-60°45'	- 82.0	21.0	18.3	2307.6	10.3	39.0
88.0	36°	-60°30'	- 91.0	9.0	7.8	2299.8	4.4	43.4
94.0	36°	-60°45'	- 99.0	8.0	7.0	2292.8	3.9	47.3
104.0	35°30'	-60°45'	-104.0	5.0	4.4	2288.4	2.4	49.7

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

RENISON LIMITED – DRILL CORE RECORD

506123 122

HOLE NUMBER	M.L. 51
PURPOSE	To test mineralisation between holes ML 38 and ML 41
LOCATION	Mt. Lindsay
COLLAR R.L.	2379.6m
CO-ORDINATES	31450.6mN 11408.6mE
LENGTH	493.0m
HOLE SIZE	Hq 0 - 21.0 Bq 80.0 - 493.0m Nq 21-80.0
DATE DRILLED	16.1.79 - 8-2-79
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R.R. Schellekens.
COMMENTS	No. 2 Carbonate much thinner than expected from surrounding drill holes. * Suspected magnetic interference.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
D[illegible]n	Bearing	Dip			D.Sin.Dip	R.L.	[illegible]s.Dip	Prog. Total
0.0m	$49^{\circ}27'09''$	$-61^{\circ}54'$	0 - 15.5	15.5	13.6	2366.0	7.3	7.3
31.0m	* 63°	-62°	- 43.0	27.5	24.3	2341.7	12.9	20.3
55.0m	49°	-62°	- 67.5	24.5	21.6	2329.1	11.5	31.7
80.0m	$46^{\circ}30'$	-62°	- 93.5	26.0	23.0	2297.1	12.2	43.9
107.0m	$46^{\circ}30'$	-62°	- 120.0	26.0	23.4	2273.7	12.4	56.3
133.0m	47°	$-62^{\circ}15'$	- 145.0	25.0	22.1	2251.6	11.6	67.9
157.0m	48°	-63°	- 169.0	24.0	21.4	2230.2	10.9	78.8
181.0m	$51^{0}30'$	-63°	- 190	21.0	18.7	2211.5	9.5	88.3
199.0m	49°	$-63^{\circ}30'$	- 214	24.0	21.5	2190.0	10.7	99.0
229.0m	$51^{\circ}30'$	$-63^{\circ}15'$	- 239.5	25.5	22.8	2167.2	11.5	110.5
250.0m	* 50°	-63°	- 262.0	22.5	20.0	2147.2	9.1	119.6
274.0m	* 49°	$-63^{\circ}15'$	- 280.0	18.0	16.1	2131.1	8.1	127.7
286.0m	48°	$-63^{\circ}30'$	- 299.5	19.5	17.5	2113.6	8.7	136.4
313.0m	* $43^{\circ}30'$	$-63^{\circ}45'$	- 329.5	30.0	26.9	2086.7	13.3	149.7
346.0m	* 53°	- 63o 30'	- 360.0	30.5	27.3	2059.1	13.6	163.3
374.0m	* 56°	$-63^{\circ}30'$	- 393.0	33.0	29.5	2029.6	14.7	178.0
412.0	55°	$-63^{\circ}30'$	- 433.0	40.0	35.8	1993.8	17.8	195.8
[illegible]	46°	$-63^{\circ}30'$	- 466.0	33.0	29.5	1964.3	[illegible]4.7	210.5
478.0	58°	$-63^{\circ}30'$	- 485.0	19.0	17.0	1947.3	8.5	219.0
492.0	42°	-64°	- 493.0	8.0	7.2	1940.1	3.5	222.5

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No. 2 Carb.	421.0	432.0	11.0	0.13	0 05	0.03	0.05		0.003	0.009	0.011	0.02	3				
Including	425.0	432.0	7.0	0.17	0.05	0.[illegible]	0.10		0.003	0.008	0.015	0.02	3				

RENISON LIMITED - DRILL CORE RECORD

506124 123

		Survey Depth	Bearing	Dip	From – To	Distance D	Vertical D.Sin.Dip	R.L.	Horizontal D.Cos.Dip	Prog. Tot.
HOLE NUMBER	ML 52	0	46° 45' 04"	-48° 10' 56°	0 - 19.0	19.0	14.2	2476.6	12.7	12.7
PURPOSE	To test Main Lode east of ML 33 Mt. Lindsay Mine	38.0	049°	- 46°	- 49.5	30.5	21.9	2454.7	21.2	33.9
		61.0	044°	- 46°	- 86.0	36.5	26.3	2428.4	25.4	59.3
LOCATION	Mt. Lindsay	111.0	046°	-48° 30'	-121.5	35.5	26.6	2401.8	23.5	82.8
		132.0	040°30'	- 49°	-145.5	24.0	18.1	2383.7	15.7	98.5
COLLAR R.L.	2490.8m	159.0	048	- 49° 30'	- 159.0	13.5	10.3	2373.4	8.8	107.3
CO-ORDINATES	31991.9m 10956.9mE									
LENGTH	159.5m									
HOLE SIZE	Hq 0 - NQ BQ - 159.5									
DATE DRILLED	*12th February - 21st February 1979									
SIGNIFICANT CORE LOSS ZONES										
ORE ZONE GROUND CONDITIONS										
LOGGED BY	R.R. Schellekens.									

COMMENTS

Loss of core due to soft weathered clayey nature of weathered main lode.

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A
Unweathered Main Lode	103.9	108.9	5.0	0.03	0.03	0.07	<0.10		0.007	0.011	0.015	<0.01	3				

RENISON LIMITED - DRILL CORE RECORD

506125   124

HOLE NUMBER	ML 53
PURPOSE	To test carbonate beds west of ML 39
LOCATION	Mt. Lindsay - E.L. 18/73
COLLAR R.L.	2452.4m
CO-ORDINATES	31706.4mN 10140.8mE
LENGTH	554.0m
HOLE SIZE	0 - 13.0 HQ 48.0 - 554.0m BQ 13.0 - 48.0 NQ
DATE DRILLED	23rd February - 26th March 1979
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R.R. Schellekens.
COMMENTS	Upper, smaller carbonate intersected in M.Z. 39 intersected in M.L.S.3. Lower carbonate (main target) not intersected in M.L.53.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0.0m	225°42'36"	- 64° 30'	0 - 23.5m	23.5	21.2	2430.8	10.1	10.1
47.0m	223°	- 65° 30'	- 77.0	53.5	48.7	2382.1	22.2	32.3
107.0m	* 252°	- 65° 45'	- 132.0	55.0	50.1	2332.0	22.6	54.9
157.0m	232°	- 65°	- 184.0	52.0	47.1	2284.9	22.0	76.9
211.0m	225°	- 65°	- 232.0	48.0	43.5	2241.4	20.3	97.2
253.0	* 240°	- 65°	- 281.5	49.5	44.9	2196.5	20.9	118.1
310.0	231°	- 65°	- 331.0	49.5	44.9	2151.6	20.9	139.0
352.0m	231°	- 65°	- 371.5	40.5	36.7	2114.9	17.1	156.1
391.0m	231°	- 65°	- 419.5	48.0	43.5	2071.4	20.3	176.4
448.0	233°	- 64½°	- 480	60.5	54.6	2016.8	26.0	202.4
512.0m	237°	- 62½°	- 554	74.0	65.6	1951.2	34.2	236.6

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	57.0	64.0	7.0	<0.01	<0.01	<0.05	<0.10		0.003	0.004	0.004	<0.01	1				

RENISON LIMITED - DRILL CORE RECORD

506126 125

HOLE NUMBER	M.L.
PURPOSE	To test the Main Lode east of the Mt. Lindsay Mine and beneath M.L. 52
LOCATION	Mt. Lindsay
COLLAR R.L.	2468.8m
CO-ORDINATES	31888.0mN 10981.3mE
LENGTH	200.2m
HOLE SIZE	Hq 0 - 10.0 Bq 19.0 - 200.2 Nq 10.0 - 19.0
DATE DRILLED	28th March - 4th April, 1979
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	<u>Good</u>
LOGGED BY	R.R.Schellekens.
COMMENTS	Tin mineralisation appears to be confined to actinolite - pyrrhotite zones - 0.2 - 0.3% Sn (core analyser); with some minor mineralisation 0.1% Sn (Core analyser) in the calc-silicate bands.

SURVEY			From - T	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0.0	42°56'28"	-50°43'1"	0 - 27.0	27.0	20.9	2447.9	17.1	17.1
54.0m	45°	- 53½°	- 80.0	53.0	42.6	2405.3	31.5	48.6
106.0m	45°	- 54°	-126.5	46.5	37.6	2367.9	27.3	75.9
147.0m	42°	- 54°	-173.0	46.5	37.6	2330.1	27.3	103.2
199.0m	38°	- 54°	- 200.2	27.2	22.0	2308.1	16.0	119.2

SUMMARY — ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No 2 ?	147.4 m	169.4	22.0 m	0.11	0.09	0.05	0.19		0.004	0.014	0.008	0.02	3				

RENISON LIMITED - DRILL CORE RECORD

506127   126

HOLE NUMBER	M.L. 55
PURPOSE	To test No. 2 Carbonate - above intersection in M.L. 51.
LOCATION	Mt. Lindsay
COLLAR R.L.	2351.2m.
CO-ORDINATES	N: 31479.6m E: 11472.7m
LENGTH	340.0m
HOLE SIZE	Hq 0-18.0., 35.0-42.0m Bq 126.0-340.0 Nq 18.0-35.0, 42.0-126.0m.
DATE DRILLED	9/4/79 - 8/5/79
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	R. Schellekens
COMMENTS	Hole intersected No 2 Carbonate twice .Repitition due to faulting (?)

SURVEY			From - To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
0.0	36° 13' 20"	-48° 49'59°	0- 13.25	13.25	10.0	2341.2	8.7	8.7
26.5	* 42°	-48°	- 45.25	32.0	23.8	2317.4	21.4	30.1
64.0	37°	-48°	- 75.5	30.25	22.5	2294.9	20.2	50.3
87.0	35°	-48°	-123.0	47.5	35.3	2259.6	31.8	82.1
159.0	40°	-48°	-172.5	49.5	36.8	2222.8	33.1	115.2
186.0	41°	-48°	-207.5	35.0	26.0	2196.8	23.4	138.6
229.0	46°	-48½°	-255.5	48.0	35.9	2160.9	31.8	170.4
282.0	* 50°	-49°	-310.5	55.0	41.5	2119.4	36.1	206.5
339.0m	45°	-49°	-340.0	29.5	22.3	2097.1	19.4	225.9
							8.7?	
	* Magnetic Tuff interference							

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A
No 2 Carbonate	188.0m	210.0m	22.0m	<0.01	0.01	<0.05	<0.10		0.004	0.007	0.005	0.09	2				
inc	[illegible]	[illegible]	5m									0.32					

RENISON LIMITED - DRILL CORE RECORD

506128 127

HOLE NUMBER	M.L. 56
PURPOSE	To test Renison Mine Sequence Equivalent close to Meredith Granite Southernpert of E.L. 18/73
LOCATION	17W. 400S Mt Lindsay Grid
COLLAR R.L.	2227.6 m
CO-ORDINATES	31,230.8 mN 8,636.9 mE } Renison Mine Grid.
LENGTH	564.3m
HOLE SIZE	NQ – BQ
DATE DRILLED	19/11/79 - 16/12/79
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	K. Wells

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Dept	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos Dip	Prog. Total
0	Mine Grid	-50°	0 - 20.0	20.0	15.3	15.3	12.9	12.9
40m	223° (casing)	-51°	- 66.5	46.5	36.1	51.4	29.3	42.2
93m	44°	-48°	-106.5	40.0	29.7	81.1	26.8	69.0
120m	43°	-48°	-153.0	46.5	34.6	115.7	31.1	100.1
186m	40°	-45°	-238.5	85.5	60.4	176.1	60.4	160.5
291m	41°	-43.5°	-340.5	102.0	70.2	246.3	74.0	234.5
390m	41°	-44°	-460.5	120.0	83.4	329.7	86.3	320.8
531	41°	-44°	-547.0	86.5	60.1	389.8	62.2	383.0
563m	94° (magnetite)	-44°	-564.3	17.3	12.0	401.8	12.4	395.4

COMMENTS

Much thicker sedimentary units were intersected, than expected. However the general succession was as predicted, (ie) lower Crimson Creek Formation ≡ (?) Ren mine sequence, dipping steeply N.E., and younging in that direction. Sequence virtually unaltered, with only weak mineralisation.

The magnetic anomaly being tested was probably caused by presence of magnetite in the conglomerate unit (≡? Renison Red Rock.)

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

RENISON LIMITED - DRILL CORE RECORD

506129 128

HOLE NUMBER	M.L. 57
PURPOSE	To test for Renison mine sequence equivalent close to the Meredith granite, beneath a magnetic anomaly at 400N/ML line 16 and a SN anomaly at 350/ML line 16.
LOCATION	600N; Line ML 16 MT. LINDSAY GRID
COLLAR R.L.	2367.3m
CO-ORDINATES	31661.9mN; 9241.1mE. (Mine grid)
LENGTH	373.50m
HOLE SIZE	0 - 20.5 H.Q. (0-3m HW) 20.5 - 72.0 N.Q. 72.0 - 373.50 B.Q.
DATE DRILLED	8.9.80 to 16.10.80
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	L. MARTIN
COMMENTS	

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			L ↑.Dip	R.L.	D.Cos.Dip	Prog. Total
COLLAR 0m	197°mag	-50°	0 - 50.0	50.0	38.30	2329.0	32.14	32.14
100m	198°mag	-49°	-125.0	75.0	56.60	2272.4	49.20	81.34
150m	200°	-49	-174.5	49.5	37.36	2235.04	32.47	113.81
199m	202°	-48.5°	-220.0	45.5	34.08	2200.94	30.15	143.96
241m	205°mag	-48°	-261.5	41.5	30.84	2170.12	27.77	171.73
282m	206°mag	-47°	-303.5	42.0	30.72	2139.4	28.64	200.37
325m	207°mag	-46°	-346.0	42.5	30.57	2108.83	29.52	229.89
367m	215°mag	-45.5°	-373.5	27.5	19.61	2089.22	19.27	249.16

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

RENISON LIMITED - DRILL CORE RECORD

506130 129

HOLE NUMBER	ML 58
PURPOSE	To test for cassiterite bearing zone of No.2 Anomaly, intersected in ML 51 and ML 55.
LOCATION	Mt. Lindsay
COLLAR R.L.	2370.922M
CO-ORDINATES	31,467,635mN (RMG) 11,440.969mE
LENGTH	83m
HOLE SIZE	0 —— 3m HQ 3 —— 51m NQ 51 —— 83m BQ
DATE DRILLED	25/11/1981 - 1/12/1981
SIGNIFICANT CORE LOSS ZONES	——
ORE ZONE GROUND CONDITIONS	
LOGGED BY	LINDA MARTIN
COMMENTS	Hole abandoned due to excessive deviation

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing (RMG)	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
Colllar	45° 19' 8"	-58°	0 - 4	4.0				
8m	51°	-58°	-15.5	11.5				
23m	51°	-58 25°	-34.0	18.5				
45m	51°	-58°	-52.0	18				
59m	51°	-58°	-64.5	12.5				
70m	58°	-58°	-77.5	13				
83m	57°	-58°	-85.0	7.5				
	(* MAG N → RMG N ADD 26-85°)							

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

RENISON LIMITED - DRILL CORE RECORD

HOLE NUMBER	ML 59
PURPOSE	To test for cassiterite bearing zone of No.2 Anomaly, intersected in ML51 and ML55.
LOCATION	Mt. Lindsay
COLLAR R.L.	2371. 145
CO-ORDINATES	31467.900 N (RMG) 11440.589 E
LENGTH	371m
HOLE SIZE	0 — 6m H.W 6 — 40m H.Q 40 — 190m N.Q 190 — 371m B.Q
DATE DRILLED	1/12/1981 - 21/12/1981
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	Excellent
LOGGED BY	LINDA MARTIN
COMMENTS	

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing (RMG)	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
Collar	41° 34' 56"	- 58°	0- 6.5	6.5	5.51	2365.64	3.44	3.44
13m	045°	- 58.75°	0- 17	10.5	8.98	2356.66	5.45	8.89
21m	045°	-58.75°	26	9.0	7.69	2348.97	4.67	13.56
31m	* 042°	- 58.75°	35.5	9.5	8.12	2340.85	4.93	18.49
40m	049°	- 58.75°	45	9.5	8.12	2332.73	4.93	23.42
50m	049.5°	- 58°	59	14.0	11.87	2320.86	7.43	30.86
68m	050°	- 58°	80.5	21.50	18.23	2302.63	11.39	42.23
93m	050.5°	- 58°	102.5	22.0	18.66	2283.97	11.66	53.89
112m	* 046°	- 58°	117	14.5	12.30	2271.67	7.68	61.57
122m	052.5°	- 58°	129.5	12.5	10.60	2261.07	6.62	68.19
137m	051°	- 58°	143.5	14.0	11.87	2249.20	7.42	75.61
150m	046.5°	- 58°	156.0	12.5	10.60	2238.60	6.62	82.23
162m	044°	- 58°	175.0	19.0	16.11	2222.49	10.07	92.30
188m	045.5°	- 57.5°	200.0	25.0	21.08	2201.41	13.43	105.73
212m	049°	- 57.5°	212	12.0	10.12	2191.29	6.45	112.18
254m	050.5°	- 56.25°						
278m	056°	- 56°						
302m	055°	- 55.5°						
332m	054°	- 54°						
362m	051.5°	- 53.75°						
	* DUBIOUS READING							

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS												B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t			
No.2 Anomaly	316.5	347.5	31m	0.08	0.04	0.06	< 0.1		<0.01	0.016	0.006	0.02	2			

RENISON LIMITED – DRILL CORE RECORD

506132 131

HOLE NUMBER	ML60
PURPOSE	To test for a cassiterite-bearing zone similar to the M138 intersection in the main ore zone.
LOCATION	Mt. Lindsay
COLLAR R.L.	2490.6
CO-ORDINATES	31726.5 N 11093.1 E
LENGTH	265.0m
HOLE SIZE	0–45.5m HQ 45.5–143.0m NQ 143.0–265.0m BQ
DATE DRILLED	4/1/82 – 18/1/82
SIGNIFICANT CORE LOSS ZONES	191.0–246.0m 48.25m (ie. 88% loss)
ORE ZONE GROUND CONDITIONS	Very large cavities
LOGGED BY	P.A. Roberts

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	[illegible]
	(BMG)							
COLLAR	035°	-56°	0–15.0	15.0	12.4	2478.2	8.4	8.4
30.0	033°	-56°	-37.5	22.5	18.7	2459.5	12.6	21.0
45.0	034°	-56°	-52.0	14.5	12.0	2447.5	8.1	29.1
59.0	034°	-56.5°	-67.0	15.0	12.5	2435.0	8.3	37.4
75.0	033°	-55.5°	-79.0	12.0	9.9	2425.1	6.8	44.2
83.0	035°	-56°	-98.0	19.0	15.8	2409.3	10.6	54.8
113.0	035°	-55°	-128.0	30.0	24.6	2384.7	17.2	72.0
143.0	037°	-55°	-151.5	23.5	19.3	2365.4	13.5	85.5
160.0	036°	-54°	-172.0	20.5	16.6	2348.8	12.0	97.5
184.0	037°	-54°	-265.0	93.0	75.2	2273.6	54.7	152.2

COMMENTS

This hole intersected the Main Ore Zone between 192.0m and 251.9m. From 192.0m–245.8m, no calcareous rocks were encountered, however only 5.65m of core was recovered, the rest being very large cavities. The cavities which were probably derived by groundwater solution of limestone, are most unusual at such depths at Mt. Lindsay. The hole failed to intersect a cassiterite-bearing zone.
Drilling was abandoned after the lower four rods of the drillstring broke off after encountering a 7m cavity between 258.0m and 265.0m. No surveys were taken below 184.0m because of the risk to the camera in such broken, unpredictable ground.

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
"MAIN ORE ZONE"	192.0	251.9	59.9	<0.01	~ <0.01	—	—	—	—	—	~ 0.003	<0.01	~ 2				

RENISON LIMITED - DRILL CORE RECORD

506133

132

HOLE NUMBER	MT. LINDSAY D.D.H. 2/1
PURPOSE	To test No.2 Anomaly
LOCATION	MT LINDSAY
COLLAR R.L.	2502.9m (1852')
CO-ORDINATES	32257.1N (2466.1'N) 10970.4E (3134.5' E)
LENGTH	106.7m
HOLE SIZE	Ax
DATE DRILLED	November 1968
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A JESSUP Relogged R. Schellekens
COMMENTS	SECTION 2.2E (Aberfoyle) Skarn type mineralisation with 45m bleached zone on top.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	46°	-35°				2502.9		
	R.M.G.				61.2	2441.7	87.4	87.4

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO$_3$	Ag g/t				
Anomaly 2	58.0	70.8	12.8	0.20		0.04											
Renison Assays																	
Anomaly 2	56.3	74.4	18.1	0.19		0.05	0.12					0.01					

RENISON LIMITED - DRILL CORE RECORD

506134 133

HOLE NUMBER	MT. LINDSAY D.D.H. 2/2
PURPOSE	To test No. 2 Anomaly
LOCATION	MT. LINDSAY
COLLAR R.L.	2495.3m (1840')
CO-ORDINATES	32237.1N (2380.2'N) 10948.5E (3104.7'E)
LENGTH	146.1m
HOLE SIZE	Ax
DATE DRILLED	December 1968
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. JESSUP Relogged R.R. Schellekens.
COMMENTS	SECTION 2.2E (Aberfoyle) Skarn type mineralisation with poorly developed mottled zone and fault at base.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	F	D.Cos.Dip	Prog. Tota
	46°	-45°				2495.3		
	R.M.G.				103.3	2392.0	103.3	103.3m

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No. 2 Anomaly	94.1	103.2	9.1	0.13		0.03	-										
Renison Assays																	
No. 2 Anomaly	95.1	104.1	9.0m	0.14		0.05	0.07										

RENISON LIMITED - DRILL CORE RECORD

506135 134

HOLE NUMBER	MT. LINDSAY D.D.H. 2/3
PURPOSE	To test No. 2 Anomaly.
LOCATION	MT LINDSAY
COLLAR R.L.	2518.6m (1902')
CO-ORDINATES	32081.2N (2170.95'N) 11141.7E (3874.21'E)
LENGTH	117.5m
HOLE SIZE	Ax
DATE DRILLED	January 1969
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. JESSUP Re logged R.R. SCHELLEKENS
COMMENTS	SECTION 10.1E (Aberfoyle) 2m of calc-silicate-rest skarn 8m mottled zone.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	[illegible]	D.Cos.Dip	Prog. Total
	46°	-35°				2511.6		
	(R.M.G).				67.4	2451.2	96.3	96.3

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	54.2	58.6	4.4	0.14		0.02											
	Renison	Assays															
	52.5	62.7	10.2	0.14		0.06	0.08										
	0.9m	core missing	59.5 - 60.4m														

RENISON LIMITED - DRILL CORE RECORD

506136 135

HOLE NUMBER	MT. LINDSAY D.D.H. 2/4
PURPOSE	To test No. 2 Anomaly
LOCATION	MT. LINDSAY
COLLAR R.L.	2518.7 (1891')
CO-ORDINATES	32068.4 N (2076'N) 11121.3 E (3853'E)
LENGTH	167.7m
HOLE SIZE	Ax
DATE DRILLED	1969
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. Jessup Re-logged by R. Schellekens
COMMENTS	Section 10.1E (Aberfoyle)

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	46°	-45°				2518.7		
	R.M.G				118.6	2400.1	118.6	118.6

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No 2 Anomaly	100.7	124.5	23.8	0.05		0.4											
	R[illegible]ison	Assays															
No 2 Anomaly	100.9	120.1	19.2	0.07		0.08	0.12										

RENISON LIMITED – DRILL CORE RECORD

506157

136

HOLE NUMBER	MT LINDSAY D.D.H. 2/5
PURPOSE	To test No. 2 Anomaly
LOCATION	MT. LINDSAY
COLLAR R.L.	2518.7m (1887')
CO-ORDINATES	32 068.4N (2076'N) 11 121.3E (3853'E)
LENGTH	179.6m
HOLE SIZE	Ax
DATE DRILLED	1969
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. JESSUP Relogged by R.R. SCHELLEKENS
COMMENTS	SECTION 10.1E (Aberfoyle) Wide mottled zone and skarn.

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Total
	46°	-65°				2518.7		
	R.M.G.				162.8	2355.9	75.9	75.9

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
No 2 Anomaly	158.0	175.4	17.4	0.11		0.05											
No 2 Anomaly	158.5	175.0	16.5	0.15		0.10	0.12					<0.01					

RENISON LIMITED - DRILL CORE RECORD

506138

137

HOLE NUMBER	MT. LINDSAY D.D.H. 2/6
PURPOSE	
LOCATION	No. 2 Anomaly
COLLAR R.L.	2562.7m (2055')
CO-ORDINATES	32,567.9N (2932.9'N) 10,704.0E (1877.35'E)
LENGTH	73.8m
HOLE SIZE	
DATE DRILLED	1969
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. JESSUP
COMMENTS	SECTION 10.8W (Aberforle) Intersected granite at 32.1m

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Prog. Tot
	46°	-45°				2562.7		
	R.M.G.				52.2	2510.5	52.2	52.2

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

506139 138

RENISON LIMITED - DRILL CORE RECORD

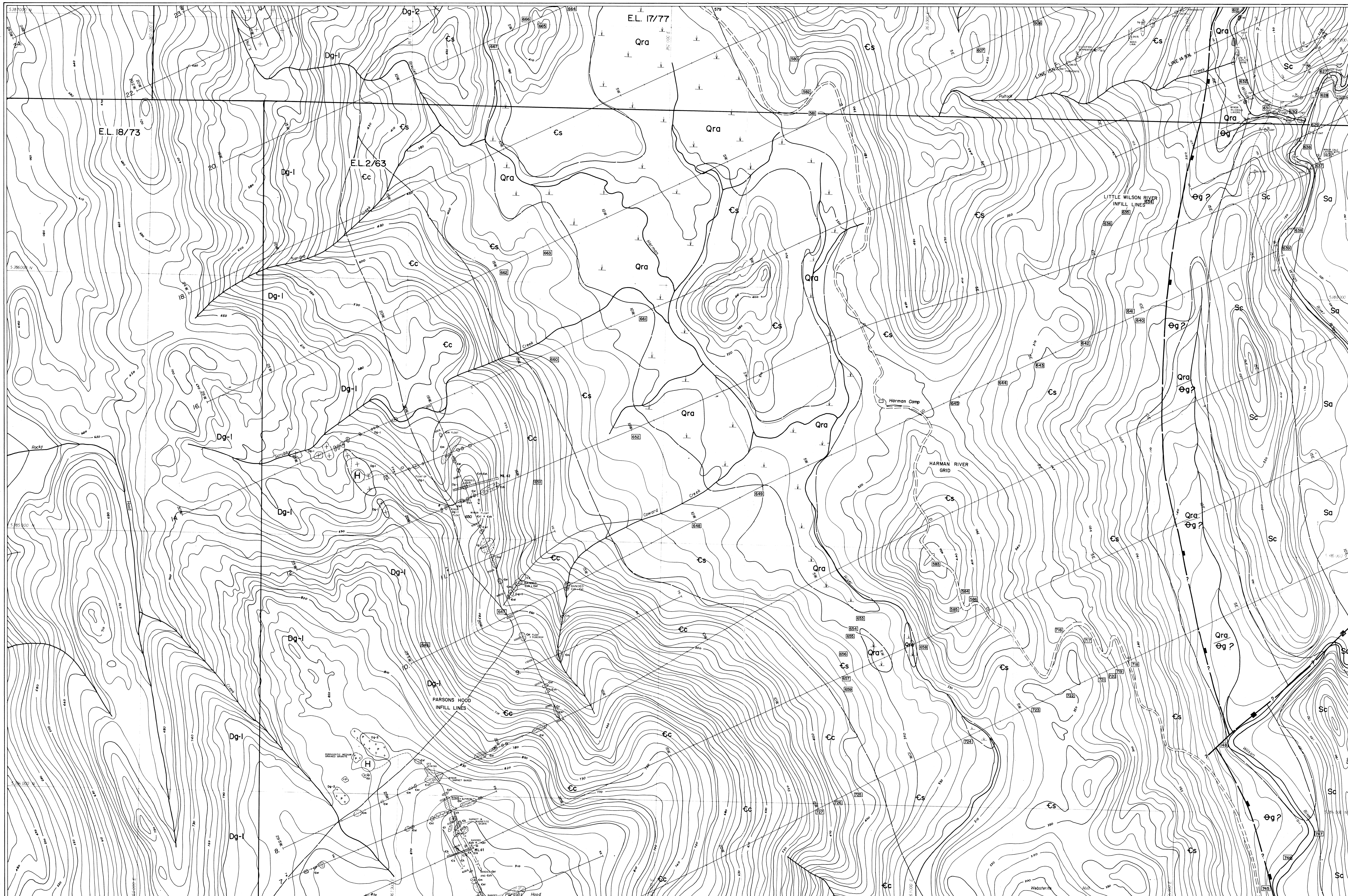
HOLE NUMBER	MT. LINDSAY D.D.H. 2/7
PURPOSE	To test No. 2 Anomaly
LOCATION	MT: LINDSAY
COLLAR R.L.	2562.7m (2053')
CO-ORDINATES	32567.9N (2928'N) 10704.0E (1885'E)
LENGTH	91.4m
HOLE SIZE	Ax
DATE DRILLED	1969
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	A. JESSUP RELOGGED BY R.R. SCHELLEKENS
COMMENTS	SECTION 9.4W (Aberfoyle) Intersected granite at 52.8m

SURVEY			From – To	Distance	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip		D	D.Sin.Dip	R.L.	D.Cos dip	Prog. Total
	100°	-38°				2562.7		
	RMG				56.9	2505.8	72.	72..

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

001



SEDIMENTARY ROCKS

Quaternary
- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff Amber Shale — Sa: Sas — Siliceous Sandstone member; Sal — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Og — Gordon Limestone
- Om ? — Moina ? Sandstone

Cambrian

Upper Cambrian
- €dh — Dundas Group (undiff)

Middle Cambrian — Crimson Ck Formation (€c)
- €m — Tuffaceous Sandstones
- €ch — Chert
- €st — Tuffaceous Siltstones / Shales
- €k — Skarn
- €h — Hornfels
- €t — Tuff

Pre-Cambrian
- p€o — Oonah Quartzite and schist

IGNEOUS ROCKS

- Tb — Tertiary Basalt
- Dg-1 — Coarse to very coarse Adamellite
- Dg-2 — Quartz Porphyry and fine grained Porphyritic Granite with wide spread Quartz Tourmaline Alteration
- Dgm — Microgranite Microgranite Dykes
- D?a — Devonian ? Acid Intrusives
- €s — Upper Cambrian Serpentinites and Mafic-ultra-mafic complexes
- €g — Cambrian Basic or Gabbroic Rocks

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage, parting shear
- Dyke

DATA SOURCE

Data presented is a compilation of:
- Renison Mapping
- A.V. Brown (1980's) - Mines Dept
- Photogeological interpretation by P.R. Boshier

506140

5 cm

RENISON LIMITED

83-2048

CORINNA D1/4

INTERPRETATIVE AND FACTUAL GEOLOGY PLAN 001

GEOLOGIST	: L. Martin	SCALE 1:5000 METRES
DRAUGHTSMAN	: T.G.D.S.	
DATE	: July, 1982.	
REVISIONS	: A. CARTWRIGHT June, 83	DRAWING No. 2

506141

83-2048

RENISON LIMITED	DRAWN	L.M./A.C.
E.L. 2/63 - MT. LINDSAY AREA PARSONS HOOD INFILL LINES LINE 6	TRACED	T.G.D.S./S.F.
	DATE	MAY, 82/JUNE, 83
SECTION LOOKING NORTH	SCALE	1:2000
SCALE 1:2000 METRES 40 0 40 80 120	DRAWING No.	3

002

I.P. DATA

CHARGEABILITY

RESISTIVITY

420 Left hand array

430 Right hand array

MAGNETICS

5000 γ SCALE

1000 γ SCALE

GEOCHEMISTRY

Sn

Cu

Pb

Zn

As

WO_3

SEDIMENTARY ROCKS

Quarternary

Qra — Recent Alluvium

Cambrian

Єc — Crimson Creek Formation Middle Cambrian

Єst — Tuffaceous Siltstones / Shales

5 cm

IGNEOUS ROCKS

Devonian

Dm: Dg-1 — Coarse to very coarse Adamellite

Dg-2 — Quartz porphyry and fine grained Porphyritic Granite

Dgm — Microgranite; Microgranite Dykes

Tourmalinised Granite

D?a — Devonian ? acid Intrusives

Cambrian

Єs — Upper Cambrian Serpentinites and Mafic-ultra-mafic complexes.

Єg — Cambrian Basic or Gabbroic Rocks.

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage: parting: shear
- Dyke

506142

83-2048

RENISON LIMITED		
E.L. 2/63 - MT. LINDSAY AREA PARSONS HOOD INFILL LINES LINE 12 SECTION LOOKING NORTH	DRAWN	L. Martin
	TRACED	T.G.D.S.
	DATE	May 1982
	SCALE	1:2000
SCALE 1:2000 METRES 40 0 40 80 120	DRAWING No.	4

003

I.P. DATA

- CHARGEABILITY
- RESISTIVITY
- 420 Left hand array
- 430 Right hand array

MAGNETICS

- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY

- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quarternary

- Qra — Recent Alluvium

Cambrian

- €c — Crimson Creek Formation Middle Cambrian
- €ch — Chert
- €st — Tuffaceous Silstones/Shales

IGNEOUS ROCKS

Devonian

- Dm Dg-1 — Coarse to very coarse Adamellite
- Dm Dg-2 — Quartz porphyry and fine grained Porphyritic Granite
- Dm Dgm — Microgranite; Microgranite Dykes
- Tourmalinised Granite
- D?a — Devonian ? acid Intrusives

Cambrian

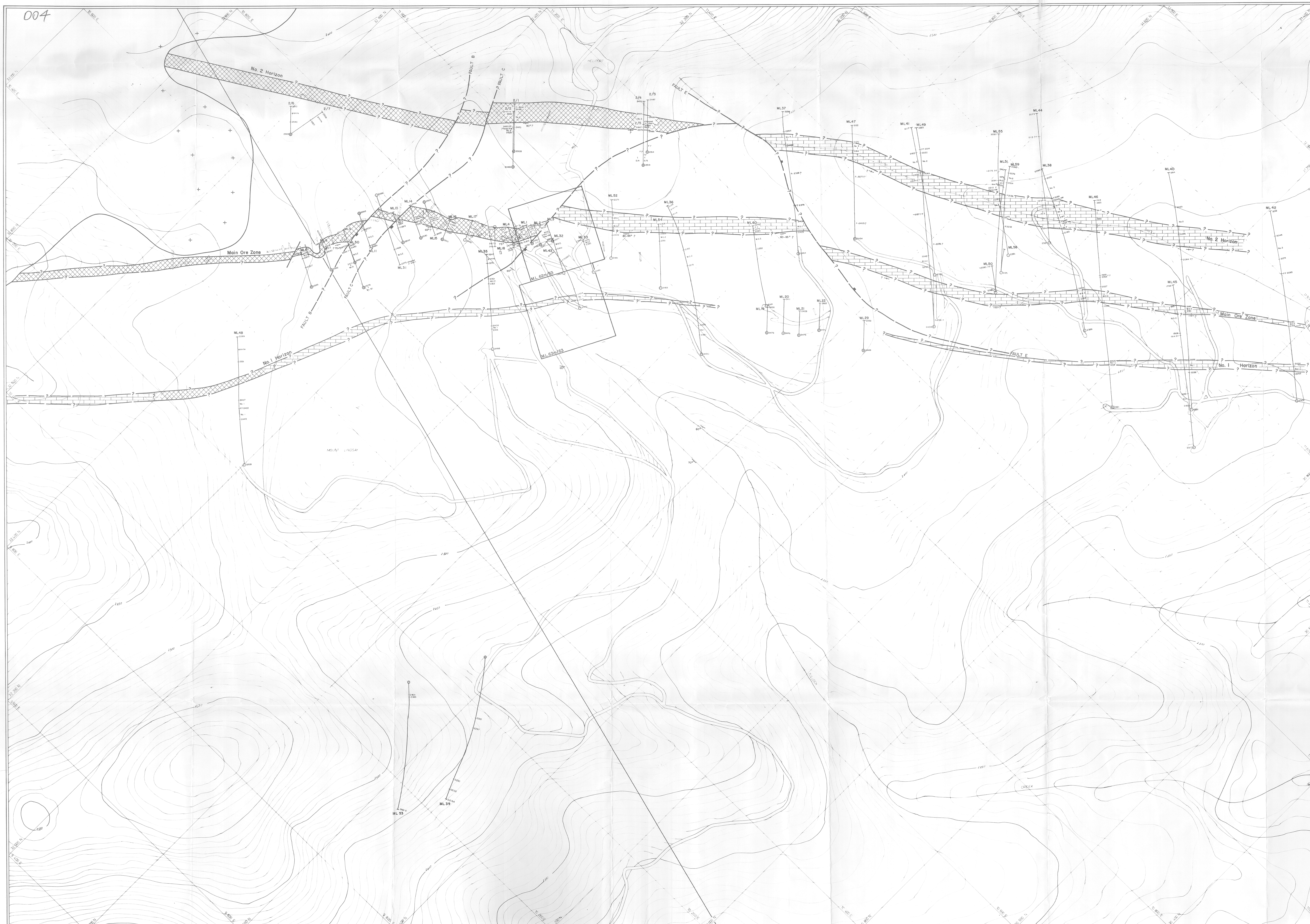
- €s — Upper Cambrian Serpentinites and Mafic-ultra-mafic complexes.
- €g — Cambrian Basic or Gabbroic Rocks.

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage: parting: shear
- Dyke

5 cm

004



LEGEND

CRIMSON CREEK FORMATION

UPPER PRECAMBRIAN TO LOWER CAMBRIAN		Volcaniclastic sediments, tuffaceous greywacke, siltstone, minor chert
		Carbonate-chert horizon, partly converted to calc-silicates. Magnetite bearing skarn derived from carbonate.

INTRUSIVES

DEVONIAN	+ +	Meredith Granite
		Lithological contact, position known.
	?	Lithological contact, position inferred.
		Fault, position known.
	?	Fault, position inferred
	85°?	Dip inferred from structural interpretation
	80°	Measured dip and strike

5 cm

Note: This geological map has been drawn largely from the revised structural interpretation with some surface mapping confirmation:

(1) In the immediate mine area, from early Aberfoyle data (Morton, 1964)

(2) Elsewhere, from the results of grid line mapping by R. Schellekens and others.

Unfortunately, as the carbonate horizons do not outcrop, the major faults D and E have not been observed and are inferred solely from drillhole data.

NOTE Photogrammetry by H E C 1975

CORINNA D-3 (1 10,000)

D3/1 (1 5000)
D3/2
M 16
M 17
D3/3
D3/4

506143

LEGEND

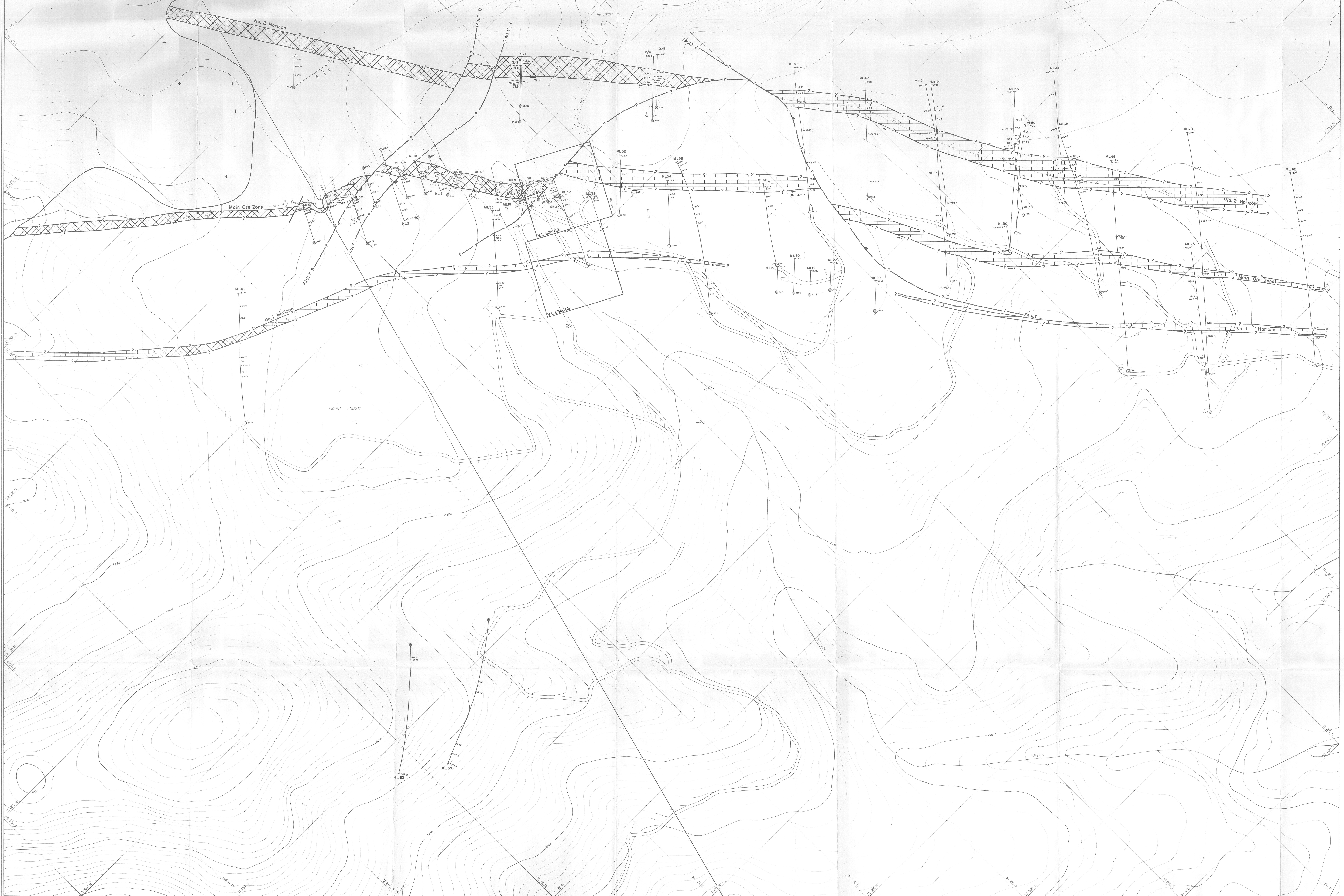
F	Fault
M.O.Z.	Main Ore Zone
No. 2	No. 2 Carbonate Horizon
No. 1	No. 1 Carbonate Horizon

RENISON LIMITED

MOUNT LINDSAY M 16 004

INTERPRETIVE GEOLOGY & DRILL HOLE LOCALITY PLAN

GEOLOGIST : P.R. | SCALE 1:2000 METRES



LEGEND

CRIMSON CREEK FORMATION

UPPER PRECAMBRIAN TO LOWER CAMBRIAN
- Volcaniclastic sediments, tuffaceous greywacke, siltstone, minor chert
- Carbonate-chert horizon, partly converted to calc-silicates. Magnetite bearing skarn derived from carbonate.

INTRUSIVES

DEVONIAN
- Meredith Granite

- Lithological contact, position known.
- Lithological contact, position inferred.
- Fault, position known.
- Fault, position inferred
- 85°? Dip inferred from structural interpretation
- 80° Measured dip and strike

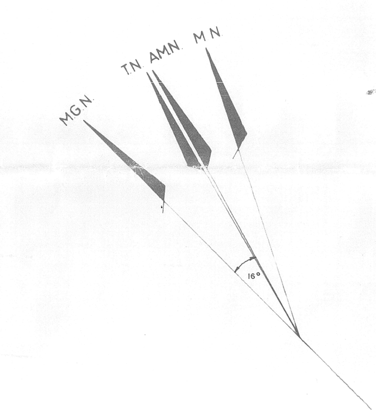
5 cm

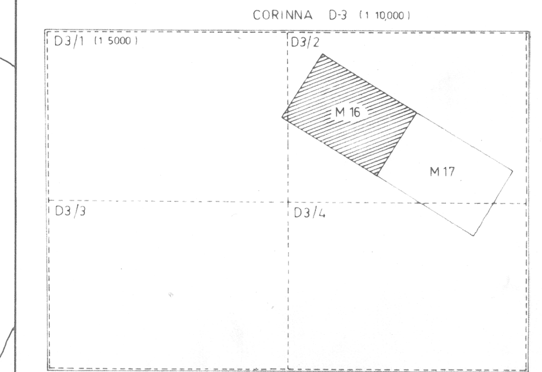
Note: This geological map has been drawn largely from the revised structural interpretation with some surface mapping confirmation:

(1) In the immediate mine area, from early Aberfoyle data (Morton, 1964)

(2) Elsewhere, from the results of grid line mapping by R. Schellekens and others.

Unfortunately, as the carbonate horizons do not outcrop, the major faults D and E have not been observed and are inferred solely from drillhole data.





506143

LEGEND

F	Fault
M.O.Z.	Main Ore Zone
No. 2	No. 2 Carbonate Horizon
No. 1	No. 1 Carbonate Horizon

NOTE:

Mining lease locations taken from early Aberfoyle plans. Lease positions are approximate only..

5 cm

RENISON LIMITED

MOUNT LINDSAY M 16 004

INTERPRETIVE GEOLOGY & DRILL HOLE LOCALITY PLAN

GEOLOGIST	:	P.R.
DRAUGHTSMAN	:	T.G.D.S.
DATE	:	Oct., 1983
REVISIONS	:	83-2048

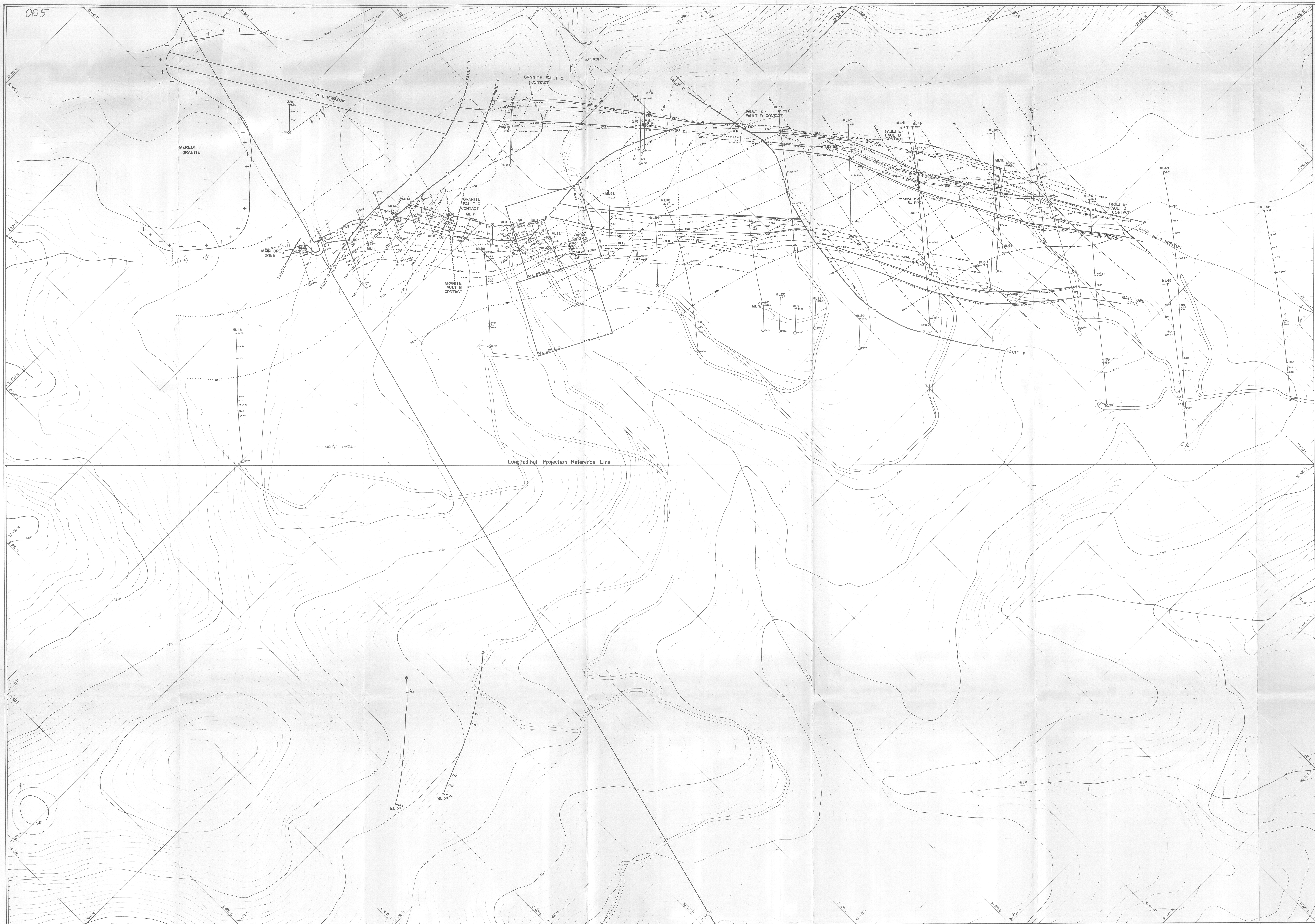
SCALE 1:2000 METRES

40 0 40 80

DRAWING No. 5

004

005



LEGEND

		Main Ore Zone contours	No. 2 Horizon contours			
———	Interpreted outcrop boundary or fault			Footwall Fault block 1 (below fault C)	F	Fault
....	Granite contours			Footwall Fault block 2 (below fault D)	M.O.Z.	Main Ore Zone
—B—	Fault B contours			Footwall Fault block 3 (below fault E)	No. 2	No. 2 Carbonate Horizon
—C—	Fault C contours			Footwall Fault block 4 (below fault C)	No. 1	No. 1 Carbonate Horizon
—D—	Fault D contours			Hanging wall Fault block 1 (below fault C)		

506144

RENISON LIMITED

MOUNT LINDSAY M 16 005

STRUCTURAL CONTOUR PLAN

GEOLOGIST : P.R. | SCALE 1:2000 METRES

LEGEND

——	Interpreted outcrop boundary or fault
· · · · · ·	Granite contours
——B——	Fault B contours
——C——	Fault C contours
——D——	Fault D contours
——E——	Fault E contours

Main Ore Zone contours	No. 2 Horizon contours	
		Footwall Fault block 1 (below fault C)
		Footwall Fault block 2 (below fault D)
		Footwall Fault block 3 (below fault E)
		Footwall Fault block 4 (below fault C)
		Hanging wall Fault block 1 (below fault C)
		Hanging wall Fault block 2 (below fault D)
		Hanging wall Fault block 3 (below fault E)
		Hanging wall Fault block 4 (below fault D)

NOTE: Fault D is interpreted as terminating against Fault E, however there is no evidence for this. It is quite likely that the two faults both offset each other.

F	Fault
M.O.Z.	Main Ore Zone
No. 2	No. 2 Carbonate Horizon
No. 1	No. 1 Carbonate Horizon

NOTE: Mining lease locations taken from early Aberfoyle plans. Lease positions are approximate only.

5 cm

RENISON LIMITED

MOUNT LINDSAY M 16 005

STRUCTURAL CONTOUR PLAN

GEOLOGIST	:	P.R.
DRAUGHTSMAN	:	T.G.D.S.
DATE	:	Oct., 1983
REVISIONS		83-2048

SCALE 1:2000 METRES

DRAWING No. 6

006

506145

LEGEND

hangingwall intersection HW — ML 32	Hole No.
25m	Estimated horizontal thickness of complete Main Ore Zone
●	Centre of mineralized intersection (or where barren, centre of the M.O.Z. intersection)
5m @ 0.5% Sn	Estimated horizontal thickness of mineralized intersection
footwall intersection FW — (0.13% Sol.) <0.01% WO_3	Value in brackets is acid soluble tin (Renison assay)
———	Surface is projected centre of the Main Ore Zone, interpreted outcrop position
– – – –	Fault gap at centre of the Main Ore Zone's interpreted outcrop position
+ + +	Approximate position of granite
—— · ——	Projection of fault - hangingwall contact
—— · · ——	Projection of fault - footwall contact

NOTES:

1. ML1 to ML33 were drilled by Aberfoyle between 1962 and 1969 and all data relating to their holes should be regarded as approximate only.
2. Projection plane runs grid NW-SE and faces N.E.
3. Grid and R.L. systems used are Renison Mine Systems
4. Projection limits correspond to those of the Mt. Lindsay 1:2000 base plan M16.
5. Section lines correspond to the RMG northings where they intersect the longitudinal reference line shown on the structure contour plan.

GOLD FIELDS EXPLORATION PTY. LIMITED

MT. LINDSAY
83-2048

LONGITUDINAL PROJECTION
MAIN ORE ZONE

006

DRAWN BY	P.A.R.
DRAFTSMAN	T.G.D.S.
DATE	Oct.'83
REVISIONS	
FILE NO.	

SCALE 1:2000 — 40 20 0 40 80 METRES

FIG. 7a

5 cm

007

506146

LEGEND

hangingwall intersection	HW 2/3	Hole No.
	24m	Estimated horizontal thickness of complete No. 2 Horizon
	5m x 0·5 % Sn	Centre of mineralized intersection or, where barren, centre of the No. 2 Horizon intersection. Estimated horizontal thickness of mineralized intersection
footwall intersection	FW (0·13 % Sol.) (0·01% WO_3	Value in brackets is acid soluble tin (Renison assay)
	———	Surface is projected centre of the No. 2 Horizon, interpreted outcrop position
	— — —	Fault gap at centre of the No. 2 Horizon, interpreted outcrop position
	+ + +	Approximate position of granite
	— — —	Projection of fault - hangingwall contact
	—·—·—	Projection of fault - footwall contact

NOTES :

1. Drillholes 2/1 to 2/5 were drilled by Aberfoyle in 1968-1969 and all data relating to their holes should be regarded as approximate only.
2. Projection plane runs grid NW-SE and faces N.E.
3. Grid and R.L. systems used are Renison Mine Systems.
4. Projection limits correspond to those of the Mt. Lindsay 1:2000 base plan M16.
5. Section lines correspond to the RMG northings where they intersect the longitudinal reference line shown on the structure contour plan.
6. Fault block 3 (between Faults D & E) does not outcrop (see Structure Contour Plan)

5 cm

GOLD FIELDS EXPLORATION PTY. LIMITED

MT. LINDSAY

83-2048

LONGITUDINAL PROJECTION

No. 2 HORIZON

007

DRAWN BY	P.A.R.
DRAFTSMAN	T.G.D.S.
DATE	Oct. '83
REVISIONS	
FILE NO.	

SCALE 1:2000 — 40 20 0 40 80 METRES

FIG. 7b