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GEOPHOTO MINERALS REPORT 1971/48

GEOLOGIC, GEOCHEMICAL AND GEOPHYSICAL SURVEYS IN MONTEZUMA NORTH AREA. E.L. 7/68, DUNDAS. TASMANIA.

PREPARED BY

GEOPHOTO RESOURCES CONSULTANTS

FOR

TEXINS DEVELOPMENT PTY. LTD.

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AMG REFERENCE POINTS ADDED

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ABSTRACT

Detailed geologic, geochemical and geophysical investigation over a 0.44 square mile (1.15km^2) area within E.L. 7/68 Dundas, Tasmania known as Montezuma North was conducted during the latter part of 1971.

This area is along Montezuma Fault which was geologically and geophysically identified during this survey as a high angle reverse fault.

Although rock exposure is scarce, sulphide mineralization was identified megascopically. Microscopic study of polished sections indicate the presence of pyrite, arsenopyrite, galena and sphalerite as well as minor tenorite, tennantite-tetrahedrite and bournonite.

This study indicates the presence of mineralization different from that in Kosminsky-South Comet area. This difference is encouraging as it indicates that the mineralization in Montezuma North might be of a syngenetic and/or replacement nature, and consequently of a possible greater potential.

Based on this work, recommendations for further work consisting of costeaning and initial target testing by diamond drilling were made.

I. INTRODUCTION

Montezuma Fault is a north-south trending structural feature, considered to be some 8.5 miles (13.7 km) long, which crosses the eastern part of E.L. 7/68, Dundas.

The area along this fault was considered to have reasonable mineralization potential for the following reasons.

Within E.L. 7/68, Dundas, for a strike length of one mile (1.6 km), the fault brings into faulted contact rocks of the Concert Group and the Oonah Quartzite and Slate. From work previously done in the Dundas general area the Oonah Quartzite and Slate is considered as a favourable host rock for the structurally controlled lead-zinc mineralization as found in the Kosminsky-South Comet area. Due to its strike length the fault is considered as a major fault along which reconnaissance work revealed the presence of significant pyrite mineralization.

For practical purposes the whole area within E.L. 7/68 along Montezuma Fault was divided into Montezuma North and Montezuma South.

This report deals with geologic, geochemical and geophysical data gathered within Montezuma North. The relative location of Montezuma North within E.L. 7/68 is shown on the Grid

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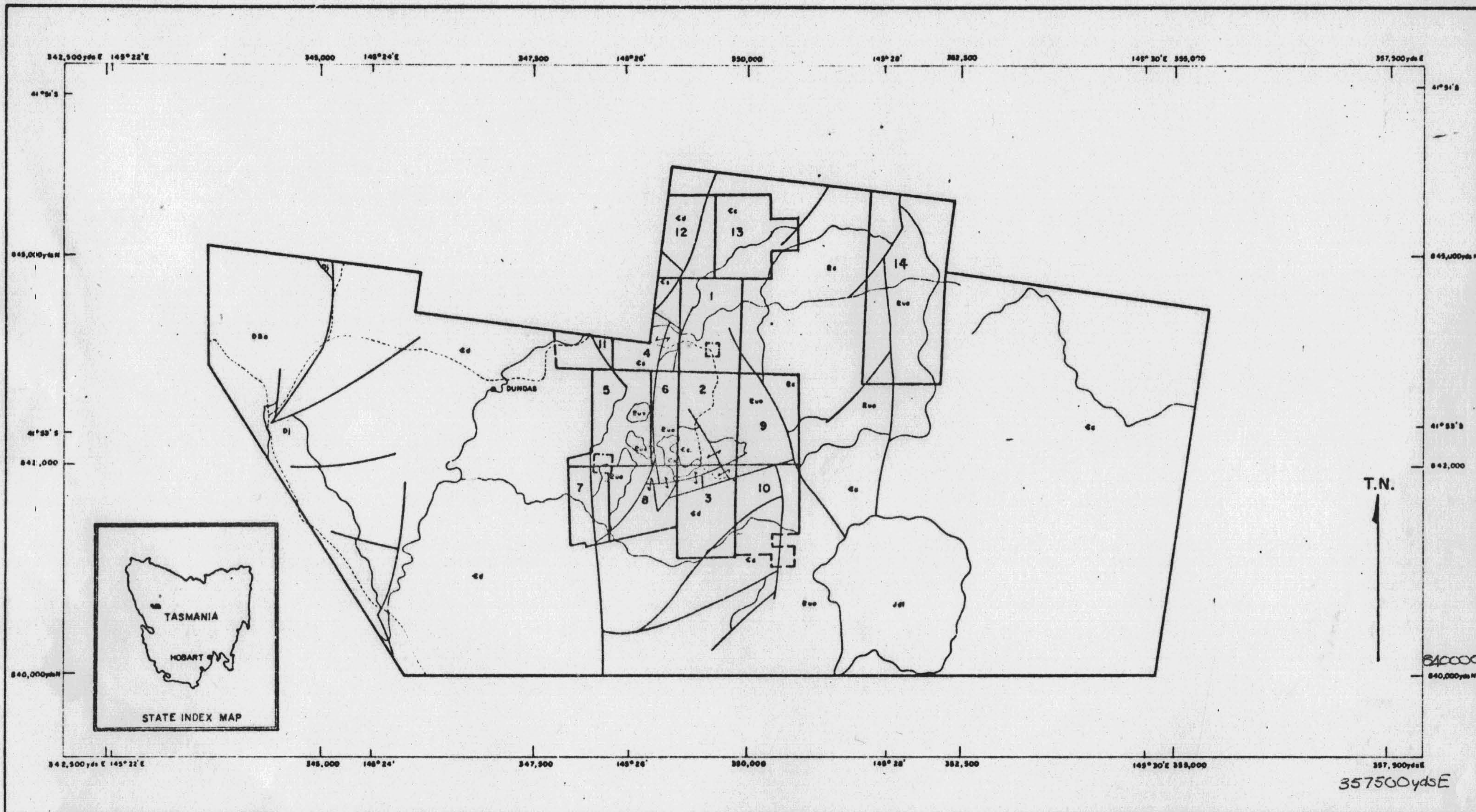

LEGEND.

1. NORTH COMET.
2. COMET - KOSMINSKY.
3. SOUTH COMET.
4. HASSET - GRAVEL PIT.
5. WEST COMET.
6. PLATT.
7. RED LEAD.
8. BONANZA.
9. AINSLIE.
10. EAST SOUTH COMET
11. RAZOR BACK.
12. CARBINE WEST.
13. CARBINE EAST.
14. MONTEZUMA NORTH.

5 cm

E.L.7/68. DUNDAS DISTRICT TASMANIA.

GRID LOCATION MAP.

SCALE.
0 1 2 Miles.

PLATE I

Location Map (Plate 1).

The Montezuma North area which is approximately 0.44 sq. mls (1.15 km^2) was covered with an east-west grid of lines 1,500ft (457m) long at 200ft (approx 61m) along a north-south base line approximately 6,400ft (1.9 km) long. Along the lines of this grid the area was mapped in detail and a ground VLF-EM geophysical survey was also completed. Ground magnetometer survey was not performed because the instrument was not available.

In addition, six adits were mapped in detail at scales from 10ft = 1in to 40ft = 1 in., as well as a traverse along Comet Creek from Ainslie Grid to Montezuma Fault and the Montezuma access road. ~~were also mapped.~~

Three rock specimens, twelve gossan specimens and eleven mullock samples were collected and geochemically analysed, while three "ore" samples were sent to Central Mineralogical Services and three other samples to McPhar to be mineralographically analysed. Along selected lines of the grid, 281 soil samples were collected at regular intervals and sent to Geophoto's Brisbane laboratory for geochemical analyses.

II. GEOLOGY

1. Concert Group

The rocks discussed under this sub-heading were assigned by Reid (1925) as being Proterozoic and have been included in previous publications as Concert Schist and defined "as the group of metasediments which appear to form the basement to the sedimentary succession in the Dundas district" (from Blissett, 1962).

Because of evidence found (and not found) during this survey, in this report these rocks are deliberately not grouped under the usual name "Concert Schist", but under the name Concert Group.

A regional, north-south trending, anticlinal structure plunging away both to the north and to the south from the Comet-Concert Creek area has exposed a core of Proterozoic pelitic metasedimentary rocks. The main types of rocks megascopically identified are shale, slate, black slate, quartzite and phyllite, and are termed in this report the Concert Group.

Rocks exposed on the far west of the western limb of the anticlinal structure include light grey and light green shales, light grey arenaceous shales, dark grey to black graphitic slates and occasionally, narrow bands of quartzite containing dark green chlorite and fine pyrite euhedra.

Further to the east, towards the anticlinal axis, black slates and black slatey phyllites occur frequently with some narrow beds of thinly laminated quartzite and black slate, (laminae ¼" - ½"), quartzite, grey slate, and one narrow band of dark olive green-grey, slatey phyllite, carrying fine lenses of specularite.

Straddling the anticlinal axis for approximately 1,000' to the west and to the east, the dominant rock type is a khaki olive-green slate, which in surface outcrop weathers to a yellow gold colour. These slates generally exhibit two sets of asymmetric crinkle folds. The development of this folding is more pronounced in the vicinity of faults where it commonly grades into drag folding. Failure has resulted along some drag folds because of excessive pressure and produced small scale reverse faults. Occasionally, kink planes were developed. Other rock types in the vicinity of the anticlinal axis include grey slates, grey and pink-grey quartzite, quartz-sericite slates and black graphitic slatey phyllites. These rocks are considered to be the product of low-grade regional metamorphism, and the evidence mentioned so far strongly suggests the existence of an easterly increasing metamorphic grade in this area.

The black slates of the Concert Group differ from those of the Oonah Quartzite and Slate, in that they are of a slightly higher metamorphic grade and would be more accurately described as slatey phyllites. Metamorphism has obliterated the bedding for the greater part; however, it can be seen occasionally, especially where contacts between various rock types indicated different initial lithologies.

The NNW-SSE trending regional anticlinal structure is interpreted as being a primary fold feature resulting from a maximum principal stress operating from the WSW at depth.

Solomon (1965) discusses the existence of the younger Pre-Cambrian miogeosynclinal sedimentation between the older Pre-Cambrian Tyennan and Rocky Cape Geanticlines. The geanticlines were major regional structures and influence significantly the sedimentation and the complex folding and faulting which developed later. The present work has not revealed the existence of schists in the Montezuma area and it seems unlikely that a correlation with the "strongly deformed low to medium grade quartzose schists with muscovite, garnet and albite, schistose quartzites, phyllites and amphibolites" of the Older Pre-Cambrian rocks outcropping in the Central Highlands (Tyennan Geanticline), is supported. With the great thicknesses of sedimentation in this basin, the possibility of a small pod of this basement rock outcropping seems remote, considering the scale of fault movements present.

It is suggested that the rocks termed in this report the Concert Group are actually a lower portion to the Oonah Formation of which the Oonah Quartzite and Slate is the Upper group, and the rocks presented here as the Concert Group ~~is~~ are the Lower Group.

2. Oonah Quartzite and Slate

Immediately to the east of the Concert Group, in a band trending north-south, there is a sequence of rocks termed the Oonah Quartzite and Slate. It is represented by black graphitic slates and light grey micaceous quartzite, which both frequently contain pyrite euhedra, and dolomitic grey chert and quartz conglomerate. In outcrop, the group varies from about 1,400' wide in the north to 200' wide in the south.

The Oonah Quartzite and Slate is bounded to the west by the Montezuma Fault and to the east it is conformably overlain in the northern part while it is in faulted contact in the southern part with the Crimson Creek Formation.

Towards the base of the Oonah Quartzite and Slate, there is a bed of dolomitic chert and quartz conglomerate. The Montezuma Fault has disrupted this conglomerate bed, so that it outcrops only sporadically and occurs in faulted contact with the Concert Group. Only one small outcrop was found in faulted contact with the Concert Group. Another small outcrop occurs on line 16N along the Montezuma Fault between the Concert Group and the Oonah Quartzite and Slate. There is little evidence to support the idea that it is a crush conglomerate related to low angle thrust faulting; however, some of the dolomitic matrix is relatively coarse grained, that is, up to 1mm.

A large wedge-shaped block - most probably fault bounded, occurs on lines 36N and 40N. Here the Montezuma Fault branches, in a similar fashion to the trend shown on the photogeologic map (Map No. 1/201 not included in this report). On the eastern branch of the fault, significant pyrite mineralization has been found on the surface and some interesting Pb, Zn, Ag and Cu analyses have been obtained from selected dump samples. Along the western branch there is a discontinuous gossan some 1,200' long and 200' wide. Scattered throughout this gossanous zone are small breccia blocks of dolomitic conglomerate. The conglomerate is interpreted as being equivalent to the Maestries Dolomitic Conglomerate as described by Elliston (Ref. 1954). It contains well rounded pebbles of grey and white quartz, chert and dolomite, constituting about 30% of the rock, cemented by dolomitic material. The pebbles are generally smaller (i.e. ½") than those of the conglomerate described by Elliston. No evidence has been found on the Montezuma Grid to suggest the presence of an equivalent to the Platt Dolomite above the conglomerate bed.

To the south of the grid in Comet Creek, there is a band of dolomite about 30' wide. It is lithologically very similar to some of the dolomites within the Crimson Creek Formation, further to the east of the point indicated on the map as W.T. 2850'.. It may be equivalent to the Platt Dolomite. Its stratigraphic significance should become clearer when Montezuma South, area will be mapped.

Most of the Oonah Quartzite and Slate has been considerably deformed as exhibited in tight folding and zones of strong brecciation, which frequently contain lenses of massive pyrite. As observed in outcrop, the upper 200' of the sequence, however, is relatively undisturbed and strikes north-south and dips about 70°E were recorded. In this undisturbed section there are occasional well laminated quartzite and black slate beds, with laminations up to 2" thick.

3. Crimson Creek Formation

To the east of Oonah Quartzite and Slate there is a sequence of calcareous rocks termed the Crimson Creek formation. The Crimson Creek rocks overlay conformably the Oonah rocks in the north part of the area, while in the south part they are in faulted contact. ~~to the South Comet Grid, though lithologically quite different.~~

The Crimson Creek Formation is represented by mauve and green siltstones and mudstones, which are frequently inter-bedded, light grey calcarenites, with some limestone and chert beds and occasional narrow sedimentary breccia beds. The lighter coloured siltstones normally contain finely disseminated syngenetic pyrite euhedra.

The formation trends north-south and dips consistently to the east at 60^{o} - 80^{o}.

4. Rocks younger than the Crimson Creek Formation

Farther to the east, and para-conformably overlying the Crimson Creek Formation is a sequence of coarse grained light grey and white, quartz and chert conglomerates, grey quartzite and some black graphitic slates.

The stratigraphic significance of this sequence is not clear as a similar group of lithologies has not been sited elsewhere in the Dundas area.

5. Intrusives

In the southern portion of the grid, within the Crimson Creek Formation there are several small pods of poorly exposed dolerite. They are probably sill like and trend north-south along the bedding.

Crossing the Montezuma Road at MZ 2915' (as indicated on the map) there is a vertical microdolerite dyke about 2' wide trending north-south. It appears to have been emplaced along the north-south tension fracture cleavage.

The intrusives most probably correlate with the Jurassic dolerite sills common to the Dundas area.

III. STRUCTURE

Structural data gathered during this survey are presented as field observations.

The dominant structural feature in this area is the Montezuma Fault. It brings into faulted contact the older Concert Group and the younger Oonah Quartzite and Slate. Mineralization is evident along part of this faulted contact.

Concert Group

As mentioned in previous pages the dominant feature within the Concert Group is the anticlinal structure trending roughly north-south, and located immediately to the west of the Montezuma Fault. To the south the anticlinal structure is displaced westward by a strike slip fault trending east-west. Several smaller anticlines and synclines parallel the major structure. The anticlines and synclines tend to parallel the Montezuma Fault and it is considered that they have resulted from the same forces responsible for the regional faulting. From photogeology, the fault dips to the west, but no ground evidence was found along the main part of the fault to suggest its attitude. A fault encountered in Adit No. 2 within the Concert Group is roughly a north-south trending, high angle (80^{o}) reverse fault and may be a structure parallel to the

Montezuma Fault.

It is thought that both folding and faulting are primary features resulting from a principal stress operating from west-southwest.

Oonah Quartzite and Slate

This group of rocks has been strongly deformed. Several N.N.W. - S.S.E. trending, tightly folded anticlines and synclines have been identified and mapped. These features are less tightly folded in areas where there is a greater proportion of quartzite in the sequence.

The major structural trend is north-northwest to south-southeast. Tight folding has resulted from compression from the W-S.W. The compressive forces are assured to have been associated with forces which formed the Montezuma Fault. The numerous N-S trending shears tend to parallel bedding. The Oonah Quartzite and Slate being formed of lithologic units of different competence, faults with tendency to parallel bedding are to be expected.

Crimson Creek Formation

The Crimson Creek Formation strikes N-S and dips consistently from 60 - 80°E.

In the northern half of the grid, the Crimson Creek Formation rests conformably on the Oonah Quartzite and Slate. Within the Crimson Creek Formation, four mauve marker beds are present in this area. However, to the south, the lowermost mauve marker bed and the greater part of the next highest mauve marker bed have been downfaulted and are now not exposed. No significant mineralization is associated with this faulting.

IV. MINERALIZATION

Ten adits, several shafts and numerous costeans occur on the grid. Most of these workings are within the Oonah Quartzite and Slate. Six of the adits were accessible and have been mapped in detail. The geology of each adit will not be discussed as it is considered that the geological plans (see drawing No. 1/300) are self explanatory.

The most significant mineralization occurs in the vicinity of Duck Creek. Montezuma Fault branches in this area. Along its western branch there is a gossanous zone 1,200' long and 200' wide. Along the eastern branch, strong pyrite mineralization with associated arsenopyrite, galena, sphalerite and minor copper, has been found in several adits and on mullock heaps.

The wide gossan zone along the western branch of the fault is a massive, sinewy, limonitic material containing frequent large pods of coarsely crystalline pyrite cubes. Usually the pods are about 6" in diameter, except in Duck Creek, on the western margin of the gossan where one pods is about 5' wide.

The gossanous zone is not continuous but most probably consists of many closely spaced lodes, all trending northwesterly.

Towards the north of the gossan is a zone of coarse specularite. Several shafts have been sunk in its vicinity. Mullock material suggests that Pb-Zn mineralization is not present.

West of the main gossan zone, within the Concert Group, two small gossans are exposed. These are probably small lateral lodes parallel to the main lode.

Along the eastern branch of the Montezuma Fault, four adits and one inclined shaft have encountered massive pyrite with arsenopyrite, galena, sphalerite and copper mineralization, in that order of significance. The mineralization is localized within faults which dip steeply to the east.

As shown in the adit plans, none of the lodes were crossed so that it was not possible to determine the width of the lode. After intersecting the pyrite and arsenopyrite-rich lodes, the adits were driven along strike for a short distance and then abandoned.

Discussion on Mineralization

In their work "Mineralogic Zoning in the Lead-Zinc Ores of the Zeehan Field, Tasmania" (Jour. Geol. Soc. Aust. 15.1 pp. 121-137 md 15-2 pp 217-243, 1968), Both and Williams have interpreted the existence of four mineralogic zones. The outermost zone is the so called "siderite zone" and was not closed to the east where it adjoins E.L. 7/68 area.

Is the mineralization in E.L. 7/68 the same genetically and paragenetically as the one in their zoning and if so is then E.L. 7/68 part of the mineralogic zones as defined by Both and Williams?

Both and Williams' conclusion that the abundance of pyrite decreases eastward is substantiated in the Kosminsky Hill-South Comet mineralized zone of E.L. 7/68 where pyrite is not abundant and when present it is often as euhedral medium grain crystals. In the Montezuma North area however pyrite is markedly more abundant, fine grained and often as framboidal aggregates.

The abundance of pyrite in Montezuma North would suggest the "Pyritic Zone" which would have to be either a repetition of a mineralogic zone or a local phenomenon. Adding to this difficulty is the framboidal texture of pyrite which is suggestive of a syngenetic origin more than a hydrothermal origin.

The difficulty of including Montezuma North in Both and Williams' mineralogic zoning is compounded when we consider the minerals present.

Arsenopyrite, a minor constituent in the ores considered by Both and Williams, is present in Montezuma North specimens and in specimen S1 (See Appendix A) and is by far the most abundant sulphide where it cements the brecciated and banded pyrite fragments. In specimen S2 arsenopyrite replaces pyrite, galena and tennantite which is the opposite of what Both and Williams have observed.

Sphalerite has been identified megascopically as well as in polished sections, but different from Both and Williams' area, in Montezuma North sphalerite is reported to have replaced galena (Appendix A - polished section 52).

As mentioned before in this report Montezuma Fault is considered to be a high angle reverse fault, and is a major structural feature approximately 8½ miles long. Consequently it is possible to assume that the fault should extend to a much greater depth than the numerous, smaller faults which are carrying only sideritic Pb-Zn lodes and are characteristic of the Dundas Area. However, this idea of size of channelways is not well supported by the tin lode at Razorback where faulting is of a similar scale to the nearby Comet-South Comet area.

In the Montezuma North area, we are dealing with mineralization that is paragenetically distinct from that so far encountered in Dundas. Comparing the mineralization in Montezuma North with the mineralization in Dundas area one can see evidence suggesting a genetic difference as well.

Sphalerite and galena are present in what might be economic amounts in Kosminsky-South Comet zone and possibly in Montezuma North. In one of the three polished sections studied sphalerite is interpreted to have replaced galena which again is different from Both and Williams who consider sphalerite "distinctly older than galena and associated sulfosalts".

Considering silver content there are indications from chemical analyses that silver is present in galena in Kosminsky-Comet and Montezuma North area. This is not so in the area studied by Both and Williams who found that silver was in tetrahedrite mainly and not in galena. Tetrahedrite has been identified in Montezuma North but not in Kosminsky Hill-South Comet area. Based on amounts of copper versus amounts of silver, there is no relationship between tetrahedrite and silver.

The presence of tetrahedrite and tennantite in the Montezuma North specimens would also explain the relatively high content of copper.

Significant arsenopyrite mineralization has been found on the Montezuma grid. It is common at the Razorback Mine (Sn), the Fraser Mine (As and Cu) and also occurs in other cassiterite-sulphide lodes in the area.

The possibility of finding elements such as W, Bi, Sn and Cu, characteristic of the Cassiterite Zone and the Pyritic Zone, as described by Both and Williams, should be kept in mind.

V. GEOCHEMISTRY

Results of gossan analyses to date have been poor. The only two of any significance are Mz13 (Pb 1.10%), and Mz17 (Pb 1.15%), both from gossans exposed along Duck Creek. This sampling was random and of a reconnaissance nature and most probably does not really indicate the worth of the gossan. A more systematic approach is required to assess such a wide gossan zone. While the bulldozer is in the area, two costeans should be dug across the gossan in order to map and channel sample. This would also indicate the dip of the lode. In such a wide zone it is possible that the lode may be zoned. Some of the mullock material from Adits 5 and 6 showed a banding of the ore.

Geochemical Soil Survey

Scout geochemical soil survey has been performed over seven grid lines. The purpose was to find the geochemical response of anomalies outlined by the VLF-EM survey and of Montezuma Fault zone, as well as to detect possible extensions to known mineralization.

A total of 281 soil samples were collected from the C (?) horizon. The sample locations were usually 50ft but over areas of interest samples were collected every 25ft.

The -80 mesh fraction was analysed for Cu, Ni, Co, Pb, Zn and Ag by G.R.C. 1 method.

Based on cumulative frequency curves and lithologic breakdown the following thresholds were defined for lead:

Pc 70 ppm Pb

Puo & c 125 ppm Pb.

Considering values higher than threshold as anomalous, the following anomalous sections were defined.

1. Line 51.89N between 2W and 1.5E.
2. Line 47.50N between 4.75W and 2.25W
3. Line 47.50N between 9.50W and 7W (open to the west)
4. Line 40N between 6.50W and 1W (open to the west)

Cumulative frequency curves were not plotted for zinc since, by visual inspection of data it was considered that in general zinc high values coincide with the lead anomalous sections.

Anomaly 1: Average lead value for this anomalous section is 250 ppm, or five times background. The upper limit of values in this section is 4400 ppm Pb and 480 ppm Zn. This geochemically anomalous section coincides with a VLF-EM anomaly.

<u>Anomaly 2</u>: Average lead value for this anomalous section is 30 times background with isolated highs of 9500 ppm Pb and 2800 ppm Zn. Relatively high copper values parallel lead values. No direct coincidence with a VLF-EM anomaly exists, but further south there is a VLF-EM anomaly considered to be defining the fault.

<u>Anomaly 3</u>: Average lead value is nine times background with an isolated high of 4300 ppm Pb. There are no corresponding high values for zinc along this same section, whose eastern portion is within a gossanous zone.

<u>Anomaly 4</u>; Average lead value for this anomalous section is ten times background with one erratic high value of 18600 ppm Pb, 185 ppm Zn and 14 ppm Ag. Values decrease towards the west which is also a topographic decrease. A large gossan is crossed by this line and the high values are interpreted to come from the gossan zone.

This soil geochemical survey, although only of a scout nature, did prove useful. If favourable results are obtained from testing these anomalies, then an extensive geochemical soil survey should be undertaken.

VI. VLF-EM GEOPHYSICAL SURVEY

A VLF-EM geophysical survey was completed over the 200 ft (approx 61m) spaced grid lines. Readings were taken every 50ft (approx 15m). Data obtained were reduced, plotted and contoured thus generating a map.

The predominant feature of the VLF first derivative contour map (see Drawing No. 1/306 in back-pocket) is the anomaly extending south from line 51.89N (5W) through the centre of the grid. The first derivative values throughout this anomaly are high, sometimes reaching values of over 100. From previous work in the Dundas area these high values do not usually indicate mineralization, but are generally found to be associated with a fault, or a region of graphitic slate. The continuous nature of this anomaly would also suggest a fault zone, and it does seem to follow the direction of the Montezuma Fault, as identified in air photographs and on ground, although the anomaly is displaced to the east. However, from ground geologic evidence the dip in this area appears to be to the east, suggesting perhaps that the VLF anomaly delineates the fault at depth, rather than the surface expression.

The anomaly follows the fault direction closely as far south as the 18N line. However about the 12N line there is a discontinuity, and the expression on the 14N and 16N lines and the lines to the south as far as 4N is only small. There appears to be a lot of cross faulting in this area, and the anomaly continues southwards from line 4N.

Anomalies to the east of this predominant feature appear to be more interesting. The first derivative values are not so high as those of the previous anomaly, and generally seem to be more likely to indicate mineralization as they over lap areas where mineralization was identified. This anomaly extends from line 55.26N (1.25W) southwards to about line 40N.

North of this area there is a very high-value anomaly trending south-eastwards from line 64N (00E). This anomaly coincides with the contact between the Crimson Creek formation to the east, and the Oonah formation to the west. The high values of the first derivatives may possibly be due to black slates, but appear to be too large for sulphide mineralization on its own.

Trending south-eastwards from line 48N is another large anomaly with a maximum first derivative value of 127 on line 44N at 9.25W. This high value would suggest the presence of black slates, and in fact the anomaly does correspond with known black slates. There is another extremely high-valued anomaly to the north of this one also trending in a north-west direction and open to the north-west. It is likely that this high value might also be due to the presence of black slates.

VII. CONCLUSIONS AND RECOMMENDATIONS

1. Geologic and geochemical work completed to date indicate the presence of considerable pyrite and lesser lead, zinc, silver and copper mineralization along the Montezuma Fault.

2. The Montezuma Fault appears to be a high angle reverse fault (?70 - 80°), dipping westerly. — ? p.24?

3. The anticlinal structure exposing the Concert Group rocks, pitches NN.W.

4. The mineralization is a complex mixture of pyrite, arsenopyrite, galena and sphalerite, and various microscopically identified copper, silver lead minerals including chalcopyrite, tenorite, tennantite, tetrahedrite and bournonite. Pyrite is by far the most abundant mineral, frequently forming 50 - 70% of the ore.

5. Geochemistry results on selected mullock samples have shown encouraging Cu and Ag values.

6. A VLF-EM geophysical survey has identified the Montezuma Fault. Additional VLF-EM anomalies are present, but not all are considered as indicators of potential mineralization.

7. The area shows moderate promise for Pb, Zn, Ag and

possibly Cu mineralization and warrants further work.

8. Following is a general programme for further work.

After completion of the new access road to the north of the grid, and while the bulldozer is in the area, two to three days should be spent costeaning the large pyritic gossan lode. Three costeans are envisaged and are drawn on the geologic map.

It is proposed that 6 short diamond drill holes be drilled to test the two main anomalies. Drilling of the anomalous area in the vicinity of adits 3, 4, 5 and 6 should be designed to intersect the lode at about 250' - 300'. In the region, very little gossan is developed and the ore is quite fresh at shallow depths. This would entail about 1000' of diamond drilling at a cost of approximately $10,000.

The large gossan zone, on the other hand is a difficult target to drill. It is important that the target depth be below the zone of oxidation. The gossan zone is wide and oxidation is likely to be deep. The attitude of the lode here is uncertain but is thought to dip steeply to the west. More information about the gossan is required before sites are chosen and so it is proposed that the gossan be costeaned in two places, to determine the attitude of the lode and to examine and sample the gossan more carefully and systematically for reasons previously discussed in section IV.

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APPENDIX A

MINERALOGIC REPORTS

REPORT CMS 71/11/33

MONTEZUMA ORE SAMPLES

S1 (P.S. 7654)

Fragments of banded sulphides and shaley rock fragments formed by brecciation are enveloped in a sulphide matrix. This whole assemblage has been fractured and veined by a "third stage" of sulphides.

The fragments of sulphides are mainly medium-grained (30μ) banded pyrite in which many crystals exhibit euhedral outlines. However the bedded shale fragments contain framboidal pyrite of primary syngenetic origin. The brecciated banded pyrite fragments have been cemented by arsenopyrite which almost completely replaced a number of the smaller pyrite areas. In portion of the coarse-grained euhedral arsenopyrite areas interstitial coarse-grained tenorite (0.15 mm) is also present. Sheafs of tenorite crystals are present as coarse-grained late stage replacement of arsenopyrite, and late stage veins through the rock consist of tennantite and minor inclusions of tenorite.

This assemblage of sulphides and their general relationships are not uncommonly found in banded sulphide deposits of so-called syngenetic origin in the Cambrian to Siluro-Devonian sediments and volcanics in the Tasman Geosyncline. Sulphides in this sample have undergone considerable recrystallisation and remobilisation and the paragenetic sequence resulting from this is:

1. framboidal pyrite (primary),
2. banded pyrite (in fragments),
3. arsenopyrite,
4. tennantite and tenorite.

Arsenopyrite is by far the most abundant sulphide and the economically important species probably form less than 10% of the total sample.

S2 (P.S. 7655)

This sample is also typical of banded sulphide deposits and does not show the brecciation common in S1.

Two distinct bands are evident in hand specimen.

The first is pyrite-rich and consists of masses of fine cubic pyrite crystals with an interstitial matrix of galena plus traces of tennantite. In other coarser pyritic areas arsenopyrite has partly replaced pyrite and galena and tennantite occur in narrow veins (0.05 mm) through the pyrite-arsenopyrite areas.

The second distinct band of sulphides is dominantly sphalerite in which numerous fine-grained (50μ) acicular tenorite crystals are included. Minor inclusions of small cubic pyrite grains and traces of exsolution chalcopyrite are also present in the sphalerite host. Grainboundary fractures contain pyrite and tenorite. Galena is also important (second only to sphalerite in this band)

and it appears that the sphalerite has, in part, replaced galena. Veins of galena are also present with minor inclusions of tenorite. The tenorite now common as inclusions in sphalerite was probably originally included in the galena before the latter was partly replaced by the sphalerite.

S3 (P.S. 7656)

Severe brecciation has affected the sulphides in this rock.

Fragments of pyrite (up to 3 mm across), minor arsenopyrite and others consisting of bournonite are present in a fine-grained pyrite-bearing host ?silicate gangue. Minor examples of arsenopyrite replacing pyrite are again common and tenorite may occur as the interstitial matrix in a small number of the granular pyrite fragments. Traces of tenorite are present as inclusions in the bournonite grains and sometimes exsolution-like textures are formed. Traces of tetrahedrite were also observed as individual fragments.

The identity of the bournonite was checked by X.R.D.

I.F. Scott, M.Sc.

037

808039

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TELEPHONE 72 2133

50-52 MARY STREET, UNLEY, SOUTH AUSTRALIA
POSTAL ADDRESS: P.O. BOX 42, UNLEY, SOUTH AUSTRALIA 5061

CABLE "PHARGEO" ADELAIDE
TELEX "PHARGEO" AA82623

bl

MINERALOGICAL REPORT NO. 850

by: Dr. A.W.G. Whittle

8th February, 1972

TO: Mr. J.D. Juilland,
Projects Manager,
Geophoto Resources Consultants,
Millaquin House, 30 Herschel Street.
BRISBANE, QLD. 4000

YOUR REFERENCE: Purchase order no. 5857 of 13/1/72

MATERIAL: Rock samples (3)

IDENTIFICATION: numbers MJ 1
MJ 2
MJ 3

WORK REQUESTED: Polished section preparation of each specimen with brief description of ore mineralogy and associated investigations.

SAMPLES AND SECTIONS: Returned to you

McPHAR GEOPHYSICS PTY. LTD.

for A.W.G. Whittle, PhD
Mineralogical Consultant
for McPhar Geophysics Pty. Ltd.

MJ 2

MJ 1

The ore is an irregularly subhedral granular aggregate of major pyrite and subordinate arsenopyrite with smaller amounts of sphalerite, and sulphosalts which are generally anhedral, and commonly intergranular amongst the pyrite and arsenopyrite. The larger intergranular masses form thin discontinuous veinlets with quartz, as well as elongate segregations in which there are minimal pyrite and arsenopyrite. In general, the structure indicates brecciation of the sulphides, and the redistribution of the sulphosalts by flow and recrystallisation.

The zones containing the sulphosalts are very complex intergrowths of lamellar twinned bournonite with tetrahedrite, boulangerite, fine grained pyrite, arsenopyrite and sphalerite. In a few of these complexes there are small amounts of galena, and trace amounts of very fine grained chalcopyrite.

In an endeavour to resolve the nature of the sulphosalts x-ray powder diffraction photography was used on a sample obtained from a sulphosalt zone.

This confirmed the presence of gross amounts of bournonite with traces of pyrite and arsenopyrite.

Neither boulangerite nor tetrahedrite was detected, indicating they are present in low concentrations (less than 5% of the bournonite). If however it is considered that they are of importance their presence and composition could be confirmed by electron probe microanalysis which we are prepared to undertake on your behalf.

MJ 2

The ore mineral assemblage is a massive irregularly granular aggregate of major euhedral pyrite with subordinate finer grained arsenopyrite, and with irregularly shaped, generally anhedral aggregates of galena and sulphosalts. The latter occupy intergranular spaces between pyrite, arsenopyrite and the gangue minerals.

Galena is more abundant in this material than in MJ 1; it is in excess of the bournonite and boulangerite, and commonly occurs alone amongst the pyrite and arsenopyrite.

The minor components of the ore exist mainly as inclusions in pyrite. These include minute grains of pyrrhotite and of a mineral thought to be argentite. Sphalerite is absent.

A silver analysis of this sample is recommended to confirm the presence of argentite.

040

MJ 3

The assemblage of minerals is generally extremely fine grained, somewhat brecciated and strongly sheared with the recrystallisation and reorientation of the softer sulphosalts. The harder and the idiomorphic minerals display brecciation and granulation: these include pyrite, sphalerite and arsenopyrite.

The ore may originally have been banded, and this structure was accentuated by shearing. The broadest bands consist mainly of pyrite with subordinate arsenopyrite. Irregularly shaped, vein-like and sinuous patches of galena and the sulphosalts (bournonite and boulangerite) with more or less fine grained sphalerite, are dispersed amongst the brecciated pyrite.

The thinner bands are of two types. One variety consists mainly of galena and recrystallised-reoriented sulphosalts (bournonite and boulangerite) amongst which are linear trains of comminuted pyrite and sphalerite. The other type consists mainly of fractured sphalerite within a medium of stressed galena, minutely euhedral pyrite, and reoriented sulphosalts. The sphalerite in these bands contains minute euhedral pyrites and numerous minute oriented exsolved blebs of chalcopyrite of less than 2 microns size, as well as large numbers of commonly oriented lath-like inclusions of boulangerite of 20-50 microns length.

APPENDIX B

GEOCHEMICAL ANALYSES DATA.

042

FIELD SHEET No.: 007588 PROJECT No.: EL.7/68 - MONTEZUMA 808044

LAB. SHEET No.: 852/1 SAMPLE TYPE: ROCK DATE: 19th November, 1971.

SAMPLE No.	LAB. No.	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm	Cr ppm	Sn %
MZ 1	71-L-371	450		720	500			0.02
MZ 2	71-L-372	120		280	210			BLD
MZ 3	71-L-373		40	165	20	6	45	0.02
MZ 4	71-L-374		30	7100	600	38	55	0.14
WT 3125	71-L-375	60		185	420			0.02
MZ A	71-L-376		10	90	120	BLD	5	BLD
MZ 6	71-L-377	20		1000	20			0.53
MZ 7	71-L-378		30	1.98%	190	20	60	0.03
MZ 8	71-L-379		20	5950	235	26	40	0.03
MZ 10	71-L-380		20	19.75%	2.1%	37	35	0.06
MZ 13	71-L-381	275		1.10%	2300	85		BLD
MZ 14	71-L-382	605		8250	1200	47		BLD
MZ 15	71-L-383	250		1900	950			0.02
MZ 16	71-L-384	705		5200	2500			BLD
MZ 17	71-L-385	475		1.15%	2000	28		BLD
MZ 18	71-L-386	30		510	190			0.03
MZ 19	71-L-387	5		110	1800			0.02
MZ 20	71-L-388	30		950	1650			BLD

METHODS:

Cu, Ni, Pb, Zn, Ag by G.R.C. No. 1
Cr by G.R.C. No. 6
Sn by G.R.C. No. 5
B.L.D. = Below Limit of Detection

Ray W. [signature]

Chief Chemist

GEOCHEMICAL LABORATORY REPORT 808045

043

FIELD SHEET No.: 007589 PROJECT No.: EL.7/68 - DUNDAS - MONTEZUMA GRID

LAB. SHEET No.: 861/1 SAMPLE TYPE: ROCK DATE: 3rd December, 1971.

SAMPLE No.	LAB. No.	Ni ppm	Pb ppm	Zn ppm	Sn ppm	Mo ppm	W ppm		
MZ 22	71-L-601	25	1000	395	BLD				
MZ 23	71-L-602	25	4000	825	BLD				
MZ 24	71-L-603	20	670	620	BLD				
MZ 25	71-L-604	15	280	130	BLD				
MZ 27	71-L-605	120	180	170	BLD				
F1	71-L-606				0.02	BLD	BLD		
		Ni	Pb%	Zn	Sn	Cu%	Co	Ag	Sb
MJ 1		25	8.8	1700	.47%	.52	20	200	2.4%
MJ 2		20	1.55	800		.56	30	230	
MJ 3		15	36.6	3.9%		.21	10	520	

METHODS:

NATA

This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.

Ni, Pb, Zn by G.R.C. No. 1
Sn by G.R.C. No. 5 Mo by G.R.C. No. 2
W by G.R.C. No. 4
B.L.D. = Below Limit of Detection

for Chief Chemist

APPENDIX C

DESCRIPTION OF SAMPLES

Descriptions of Gossan, Rock, and Mullock Samples Analysed.

MZ 1	Gossan: Khaki brown shale breccia fragments cemented with black limonite and quartz. Spongy. 20.5N + 4W.
MZ 2	Gossan: black spongy, siliceous. 20.5N + 4W.
MZ 3	Mullock: Fine grained massive pyrite in grey quartzite host. 47.5N + 50'E
MZ 4	Mullock: Massive pyrite, some coarse crystals < ¼". Some fine galena. + 47.5N + 50'E.
MZ A	Mullock: Specularite and white sintery quartz. Slightly magnetic. Heavy. 47.5N + 6.5W + 80'N.
WT 3125	Rock: Black Slate, some pyrite staining. graphitic. sheared. W.T. track. 3125': or 60E + 33N + 10.5E.
MZ 6	Rock: Black slate with white quartz veining. Abundant pyritohedra and some coarse cassiterite < 1mm. 41.75N + 110'E. Trench.
MZ 7	Mullock: Black Slate breccia with ½" vein of massive pyrite, also ½" vein of fine grained galena. Adit No. 4. 46.75N + 65'E.

MZ 8 — Mullock: Massive pyrite with minor veinlets of galena and also fine arsenopyrite.
47.5N + 2.5E Adit No. 6.

MZ 10 — Mullock: Massive fine galena about 10% pyrite.
Adit No. 6. 47.5N + 2.5E.

MZ 13 — Gossan: White siliceous breccia fragments cemented with black limonitic material.
44N + 380'W + 170'N in creek.

MZ 14 — Gossan: 50% khaki grey ? €c breccia fragments 1" cemented with black brown limonite.
44N + 3W.

MZ 15 — Gossan: dark brown black breccia. 5% fragments.
44N + 3W.

MZ 16 — Gossan: red, ochre, brown limonite.
44N + 4.5W + 200'N.

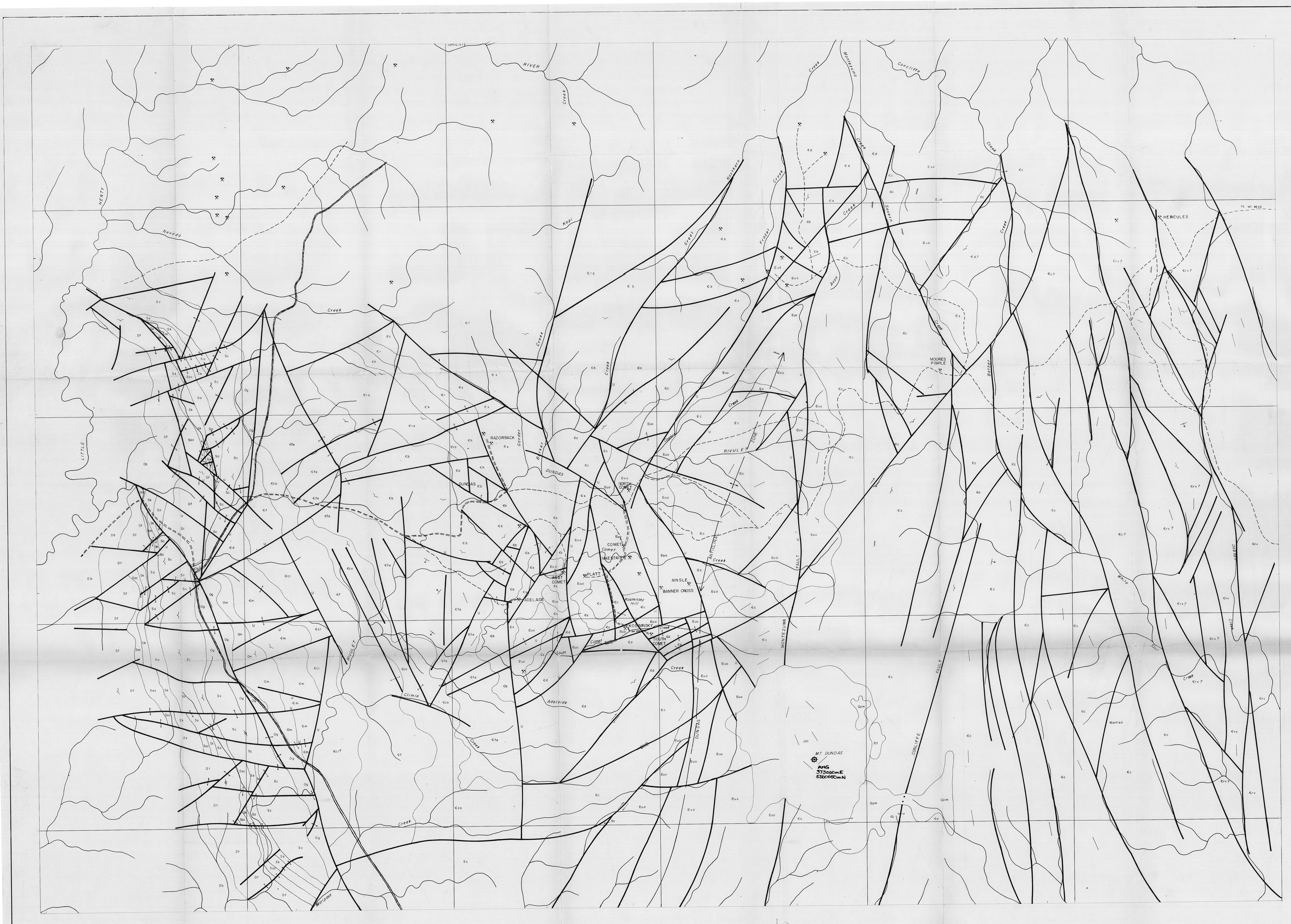
MZ 17 — Gossan: brown grey jaspery with siliceous vughs.
20' downstream from MZ 16.

MZ 18 — ? Rock: Weathered dolomitic conglomerate with honeycomb structure.
Adit near 44N + 5.5W + 145'N.

MZ 19 — Gossan: Black, limonite. Boulder in adit above.

MZ 20 — Gossan: Sheared black, outside adit above.

MZ 22	Gossan: black brown - limonitic. 40N + 1.7W + 120'N.
MZ 23	Gossan: Brown black ? siliceous. heavy. 40N + 3W + 150'N.
MZ 24	Rock: Specularite. Heavy. 47.5N + 6.5W.
MZ 25	Rock: Specularite - coarse. Heavy 47.5N + 6.5W.
MZ 27	Rock: Black slate. 24N + 5.5E + 150'N.



LEGEND

QUATERNARY		Qpm	Moraines
PERMIAN		Pt	Zeehan Glacial Formation
DEVONIAN	Eldon Group	Db	Bell Shale
		Df	Florence Quartzite
SILURIAN		Sac	Austral Creek Siltstone
		Sk	Keel Quartzite
		Sa	Amber Slate
		Sc	Crotty Quartzite
ORDOVICIAN	Junee Group	Og	Gordon Limestone
		Om	Moina Sandstone
CAMBRIAN	Dundas Group	€m	Misery Conglomerate
		€cl	Climie Formation
		€f	Fernflow Formation
		€co	Comet Formation
		€fe	Fernfields Formation
		€b	Brewery Junction Formation
		€ra	Razorback Conglomerate
		€h	Hodge Slate
		€r	Red Lead Conglomerate
		€d	Dundas Group undivided
		€rv	Mount Read Volcanics
		€c	Crimson Creek Formation
PROTEROZOIC		Puo	Oonah Quartzite
		Pc	Concert Schist

IGNEOUS ROCKS

JURASSIC	Jdl	dolerite
CAMBRIAN	€s	serpentine and pyroxenite

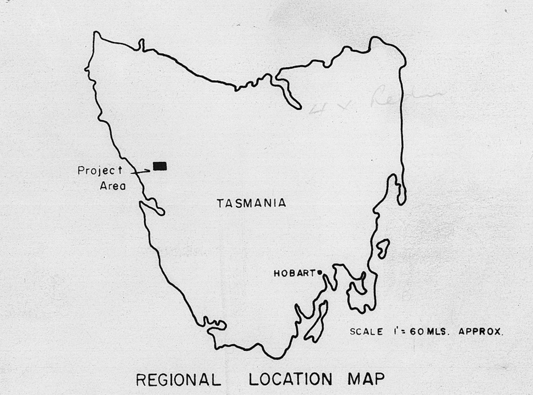
GEOLOGIC SYMBOLS

- Bedding appears horizontal on photographs
- Dip group 1, less than 3°
- Dip group 2, 3° to 10°
- Dip group 3, 10° to 25°
- Dip group 4, 25° to 45°
- Dip group 5, 45° to nearly vertical.
- Bedding appears vertical on photographs
- Overturned bedding
- Dip and strike. Amount of dip cannot be determined on photographs.
- Trend lines or strike of structural grain.
- Fault, normal or reverse. (Dotted where concealed.)
- Fault, position indefinite (Dotted where concealed.)
- Fault, inferred. (Dotted where concealed.)
- Transcurrent. (Dotted where concealed.)
- Distinctive lineation. Possible fault or fracture.
- Dike or vein.
- Joint.
- Anticline. Arrow denotes plunge, dashed where indefinite, questioned where inferred.
- Syncline. Arrow denotes plunge, dashed where indefinite, questioned where inferred.
- Contact, dashed where indefinite, questioned where inferred.
- CL Change in lithology.
- Identifies isolated or faulted segment with labelled area.

5 cm

- Road
- Vehicular track.
- Trail
- Mine or prospect

AMG REFERENCE POINTS ADDED



REGIONAL LOCATION MAP

0 1/4 1/2 1 MILES

Transverse Mercator Projection

808050 71-820

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SCIENCE SERVICES DIVISION
GEOPHOTO RESOURCES CONSULTANTS
BRISBANE. AUSTRALIA.

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TRACED	W Jongejan	11/2/70
CHECKED	[signature]	12-2-70
GEOLOGIST	[signature]	13/2/70
APPROVED		

SCALE 1:12,500

REVISIONS

TEXINS DEVELOPMENT PTY. LTD.

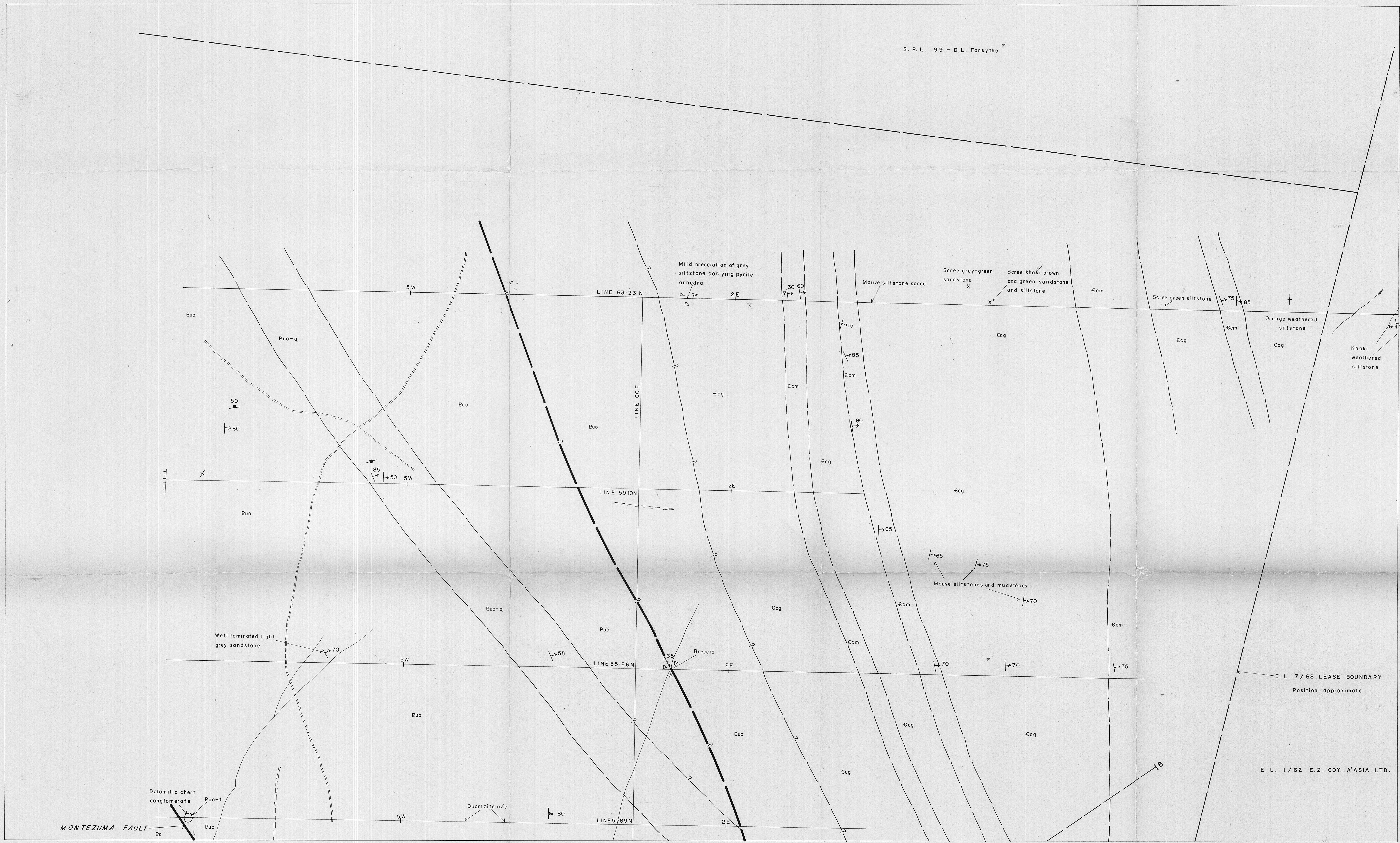
E.L. 7/68 DUNDAS DISTRICT

2163

PHOTOGEOLOGIC MAP

PROJECT 7/68 DRAWING NO. 1/201

2163



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SHEET INDEX

1
2
3
4

LEGEND

JURASSIC		Jdl	Dolerite.
LOWER - MIDDLE CAMBRIAN	CRIMSON CREEK FORMATION	€cm	Mauve siltstones & mudstones.
		€cg	Green & grey siltstones & mudstones, with light grey calcarenites & some limestone & chert beds.
UPPER PROTEROZOIC	OONAH FORMATION	Ꝑuo	Grey quartzite & black slate.
?UPPER PROTEROZOIC	CONCERT GROUP	Ꝑc	Slate, slatey phyllite & quartzite.

Ꝑuo	Grey micaceous quartzite & black slate.
Ꝑuo-q	Mainly grey micaceous quartzite.
Ꝑuo-d	? Maestries dolomitic conglomerate.

- Anticline – arrow denotes plunge.
- Syncline – arrow denotes plunge.
- Joint, inclined.
- Joint, vertical.
- Foliation, inclined.
- Foliation, vertical.
- Shearing, inclined.
- g Gossan outcrop.
- Shearing, vertical.
- Drag fold indicating pitch & plunge.
- Scarp.
- Track.
- Peak.
- Adit.
- N. Shaft inaccessible.
- Trench or costean.
- Contact, dashed where indefinite, questioned where inferred.
- Fault, dashed where indefinite, questioned where inferred, with arrow showing dip.
- Fault, showing relative movement.

Scale: 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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MONTEZUMA GRID

GEOLOGICAL MAP

2148

PROJECT	E.L. 7/68	AUTHOR	W. Turner	DATE	Dec 1971	DWG No	1/292

→ photocopy

SHEET 1 OF 4 SHEETS

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LEGEND

SHEET INDEX: 1, 2, 3, 4

JURASSIC — Dolerite

LOWER - MIDDLE CAMBRIAN — CRIMSON CREEK FORMATION

UPPER PROTEROZOIC — OONAH FORMATION

PROTEROZOIC — CONCERT GROUP

- Grey micaceous quartzite & black slate
- Mainly grey micaceous quartzite
- Dolomitic chert conglomerate
- Anticline – arrow denotes plunge
- Syncline – arrow denotes plunge
- Joint, inclined
- Joint, vertical
- Foliation, inclined
- Foliation, vertical
- Gossan outcrop
- Shearing, vertical
- Scarp
- Track
- Adit
- Shaft inaccessible
- Trench or costean
- Contact, dashed where indefinite, questioned where inferred
- Fault, dashed where indefinite, questioned where inferred, with arrow showing dip
- Fault, showing relative movement

Scale 100 Feet to 1 Inch

0 100 200 300 400 Feet

0 50 100 Metres

5 cm

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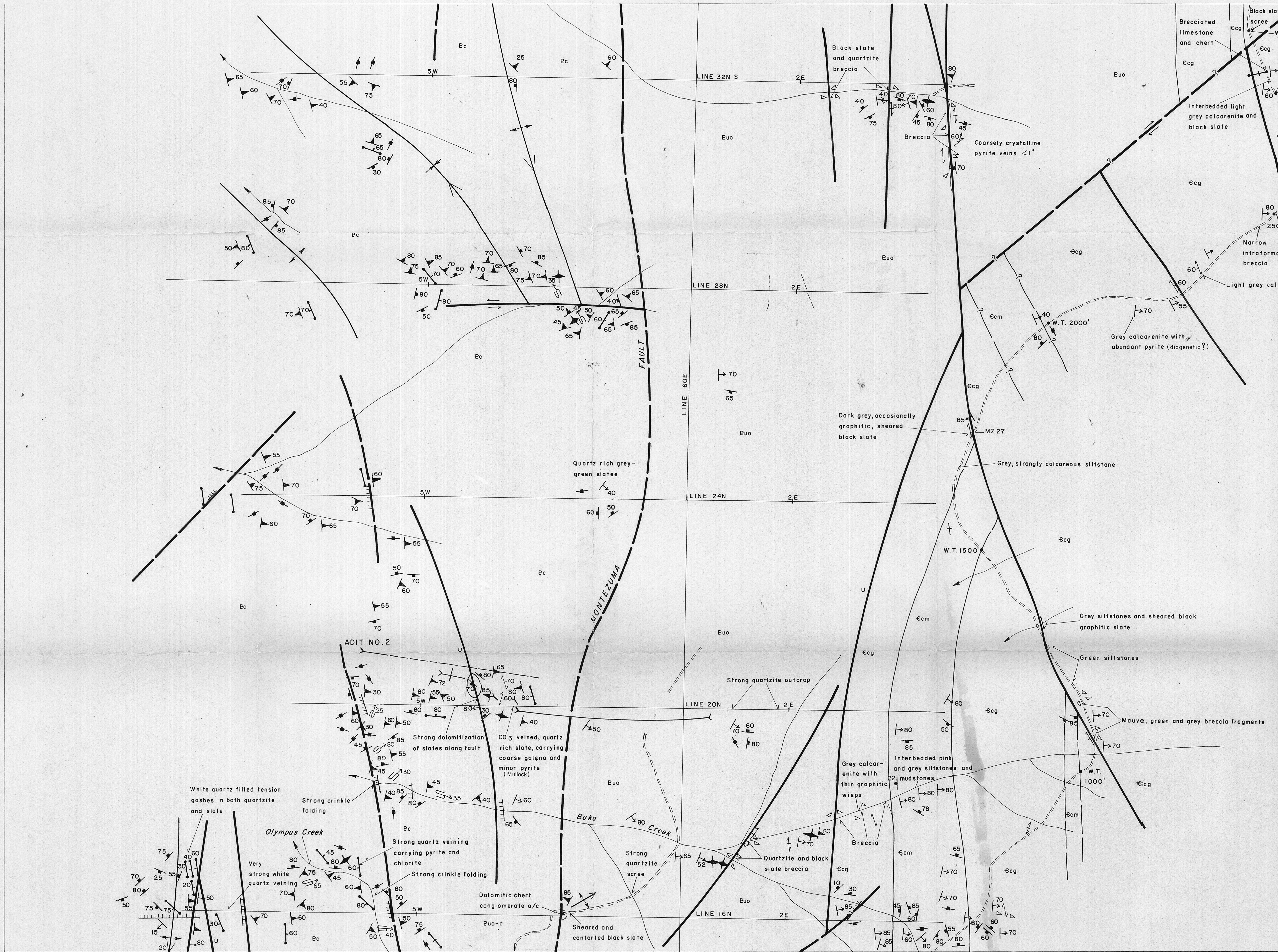
MONTEZUMA GRID GEOLOGICAL MAP

2149

PROJECT	E.L.7/68	AUTHOR	W. Turner	DATE	Dec 1971	DWG No	1/292

SHEET 2 OF 4 SHEETS



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71-820

SHEET INDEX

1
2
3
4

JURASSIC		Jdl	Dolerite.
LOWER - MIDDLE CAMBRIAN	CRIMSON CREEK FORMATION	€cm	Mauve siltstones & mudstones.
		€cg	Green & grey siltstones & mudstones, with light grey calcarenites & some limestone & chert beds.
UPPER PROTEROZOIC	OONAH FORMATION	Ꞓuo	Grey quartzite & black slate
?UPPER PROTEROZOIC	CONCERT GROUP	Ꞓc	Slate, slatey phyllite & quartzite.

- Ꞓuo — Grey micaceous quartzite & black slate.
- Ꞓuo-q — Mainly grey micaceous quartzite.
- Ꞓuo-d — ? Maestries dolomitic conglomerate.

LEGEND

- Anticline – arrow denotes plunge.
- Syncline – arrow denotes plunge.
- Joint, inclined.
- Joint, vertical.
- Foliation, inclined.
- Foliation, vertical.
- Vein, white quartz, unless otherwise indicated.
- Shearing, inclined.
- g Gossan outcrop.
- Shearing, vertical.
- Drag fold indicating pitch & plunge.
- Scarp.
- Track
- Peak.
- Adit.
- Shaft inaccessible.
- Trench or costean
- Contact, dashed where indefinite, questioned where inferred.
- Fault, dashed where indefinite, questioned where inferred, with arrow showing dip.
- Fault, showing relative movement.

Scale 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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MONTEZUMA GRID

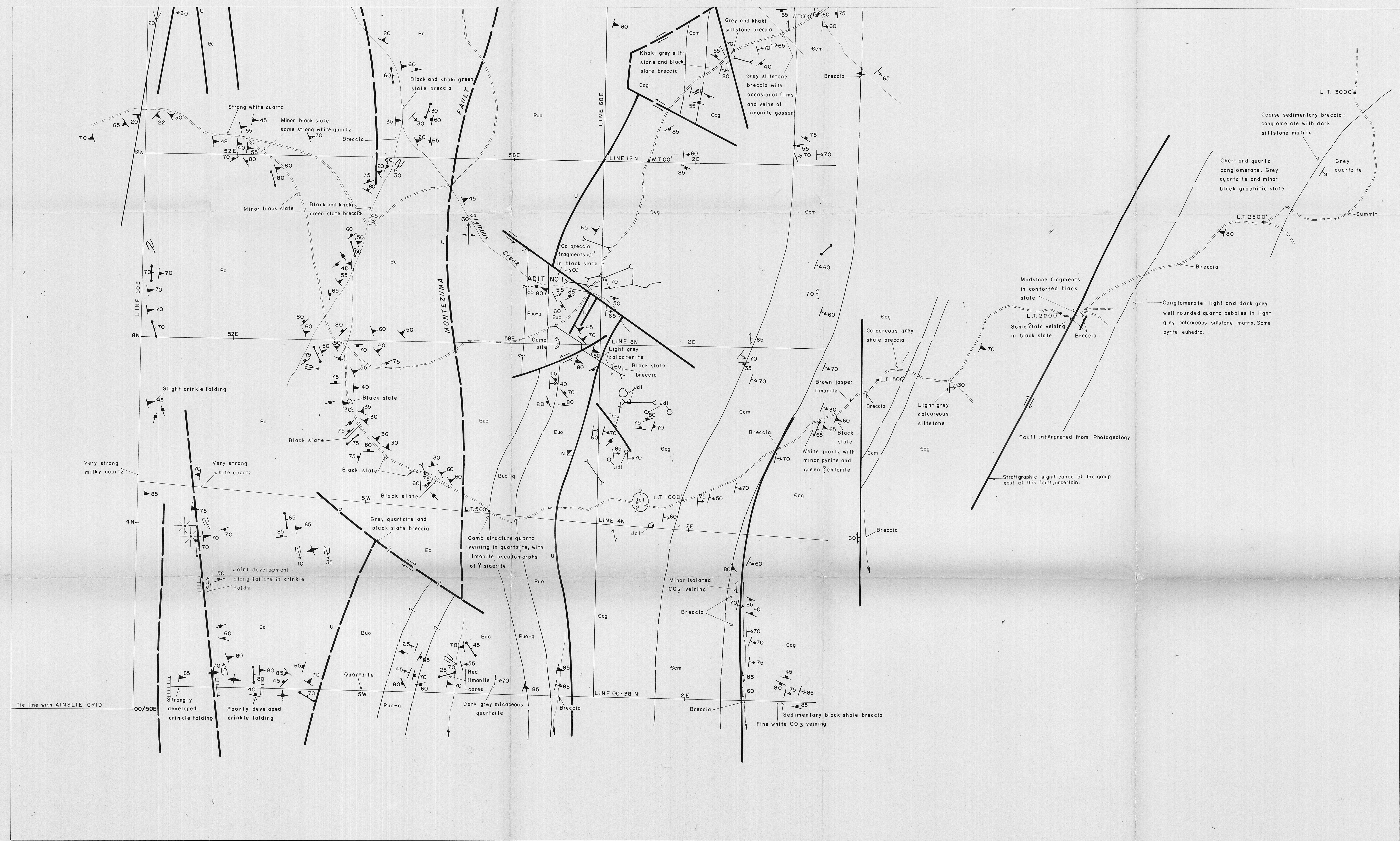
GEOLOGICAL MAP

2150

PROJECT	E.L. 7/68	AUTHOR	W. Turner	DATE	Dec 1971	DWG No	1/292

SHEET 3 OF 4 SHEETS

→ Photocopy



808054

71-820

SHEET INDEX

1
2
3
4

LEGEND

JURASSIC		Jdl	Dolerite
LOWER - MIDDLE CAMBRIAN	CRIMSON CREEK FORMATION	€cm	Mauve siltstones & mudstones.
		€cg	Green & grey siltstones & mudstones, with light grey calcarenites & some limestone & chert beds.
UPPER PROTEROZOIC	OONAH FORMATION	Ꝑuo	Grey quartzite & black slate
? UPPER PROTEROZOIC	CONCERT GROUP	Ꝑc	Slate, slatey phyllite & quartzite.

Ꝑuo	Grey micaceous quartzite & black slate.
Ꝑuo-q	Mainly grey micaceous quartzite.
Ꝑuo-d	? Maestries dolomitic conglomerate.

- Anticline – arrow denotes plunge.
- Syncline – arrow denotes plunge.
- Joint, inclined.
- Joint, vertical.
- Foliation, inclined.
- Foliation, vertical.
- Vein, white quartz, unless otherwise indicated.
- Shearing, inclined.
- g Gossan outcrop.
- Shearing, vertical.
- Drag fold indicating pitch & plunge
- Scarp.
- Track
- Peak
- Adit.
- Shaft inaccessible.
- Trench or costean
- Contact, dashed where indefinite, questioned where inferred.
- Fault, dashed where indefinite, questioned where inferred, with arrow showing dip.
- Fault, showing relative movement.

Scale 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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E.L. 7/68 DUNDAS DISTRICT TASMANIA

MONTEZUMA GRID

GEOLOGICAL MAP

2151

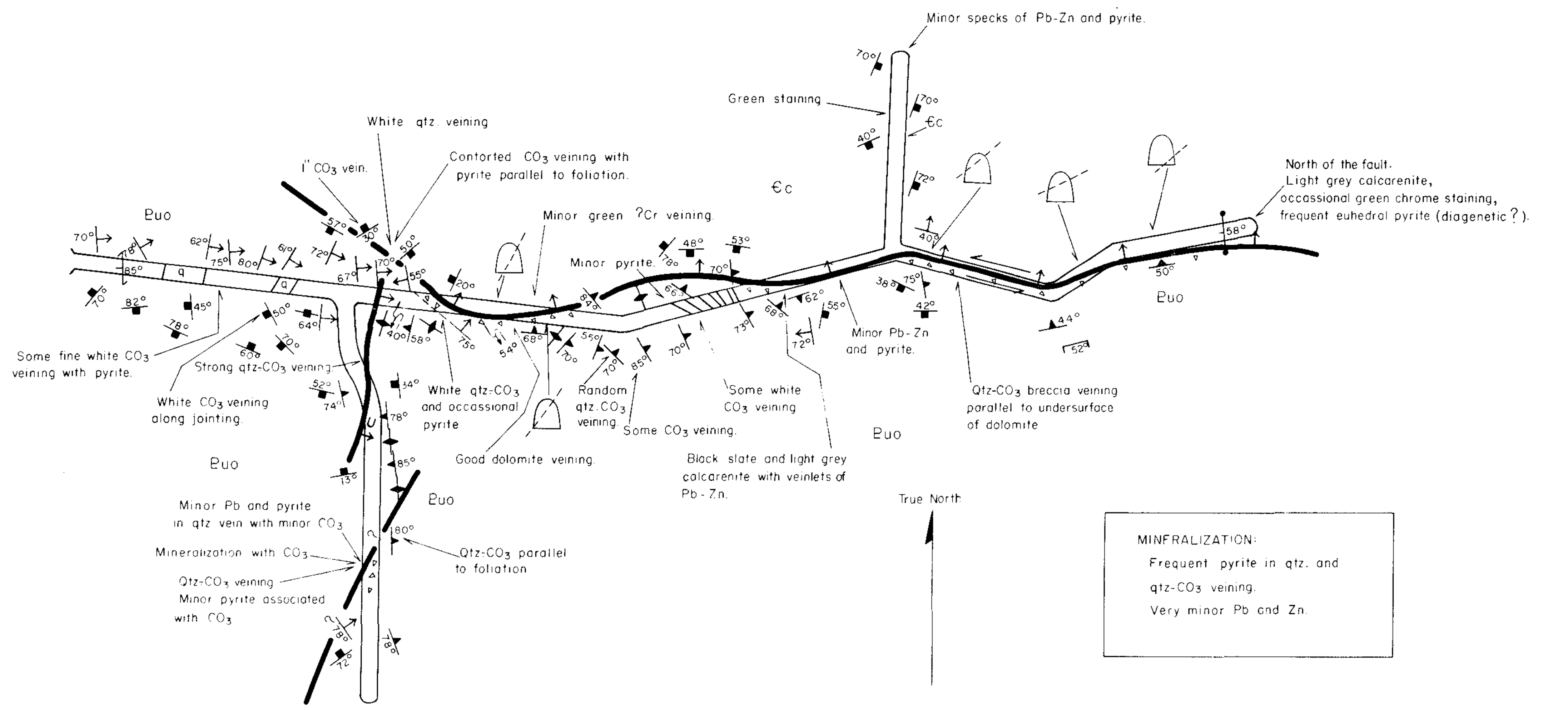
PROJECT	E.L. 7/68	AUTHOR	W. Turner	DATE	Dec 1971	DWG. No.	1/292

SHEET 4 OF 4 SHEETS

ADIT 1

SCALE: 20 FEET TO 1 INCH

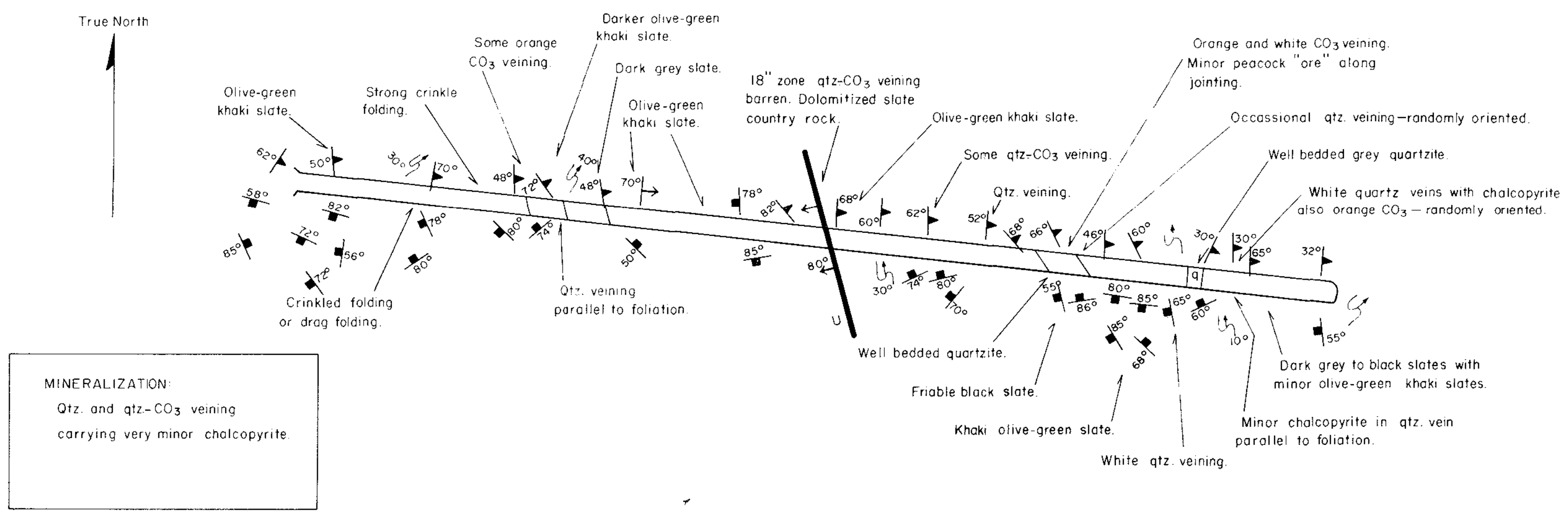
FORMATION: Ɛuo and Ɛc



ADIT 2

SCALE: 40 FEET TO 1 INCH

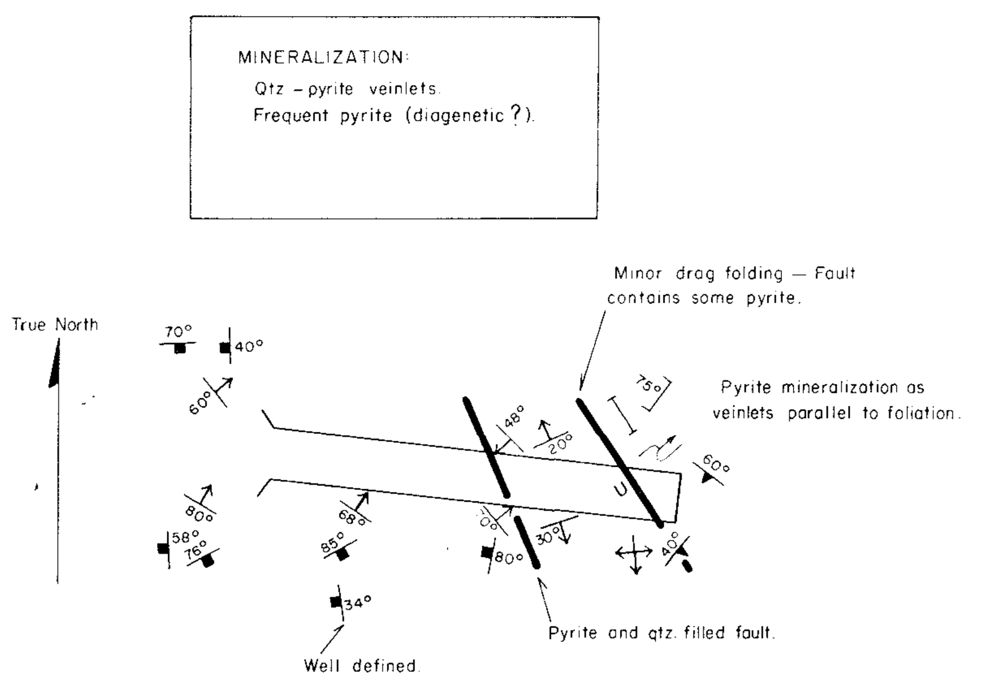
FORMATION: Ɛc



ADIT 3

SCALE: 10 FEET TO 1 INCH

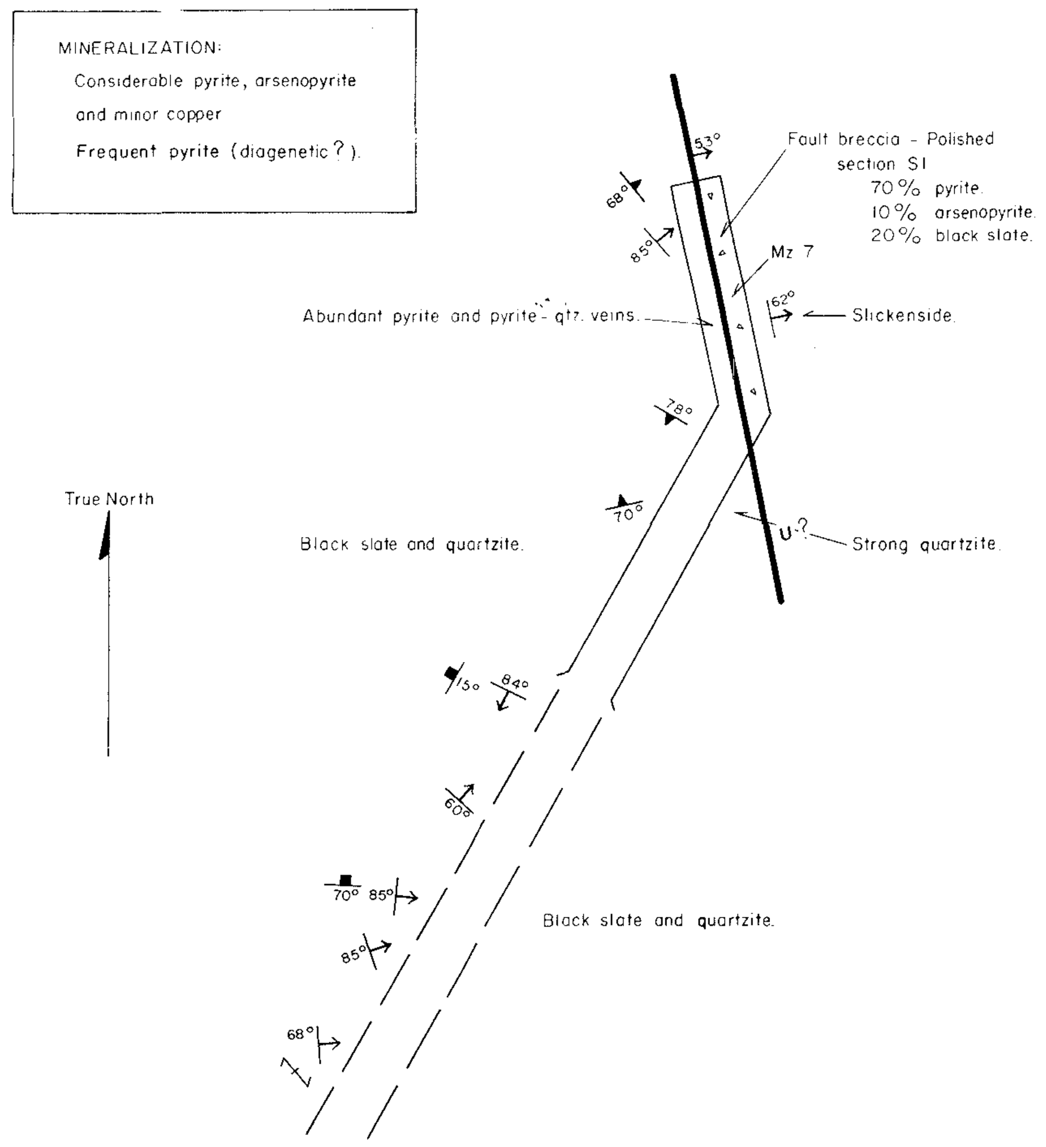
FORMATION: Ɛuo



ADIT 4

SCALE: 10 FEET TO 1 INCH

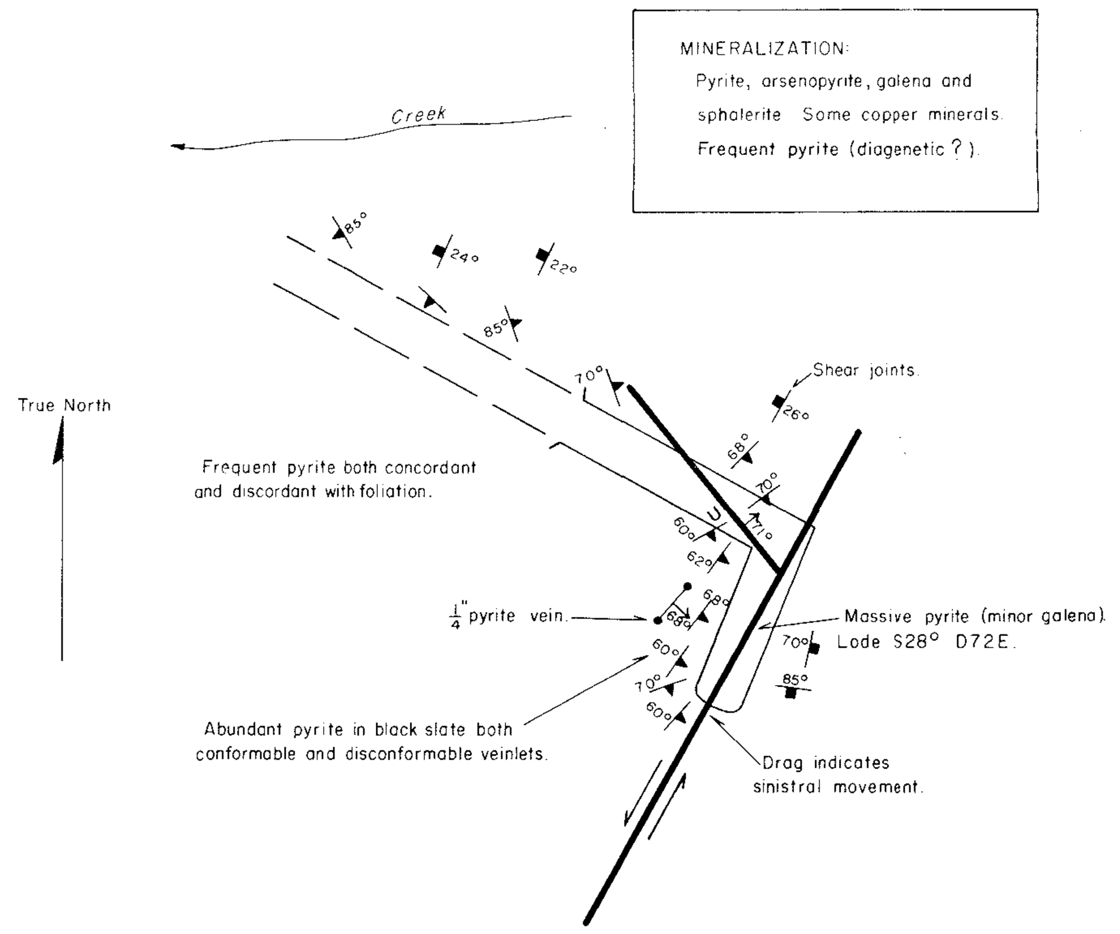
FORMATION: Ɛuo



ADIT 5

SCALE: 10 FEET TO 1 INCH

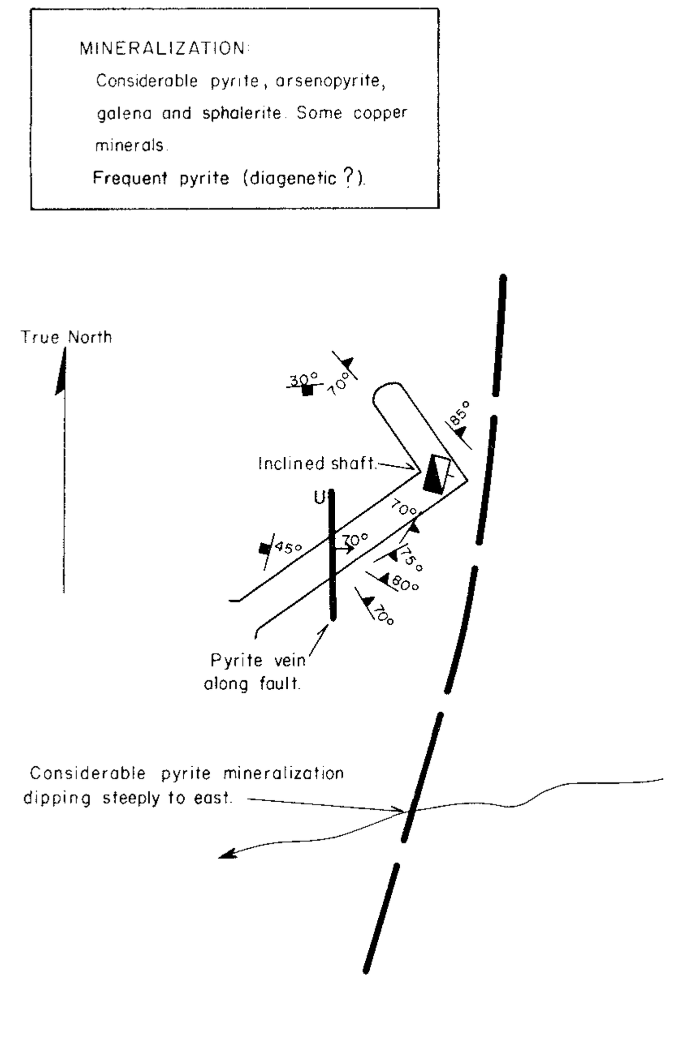
FORMATION: Ɛuo



ADIT 6

SCALE: 20 FEET TO 1 INCH

FORMATION: Ɛuo



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LEGEND

- Drag folding showing plunge.
- Field observed dip
- Shearing inclined.
- Shearing vertical.
- Foliation inclined.
- Foliation vertical.
- Cleavage inclined.
- Cleavage vertical.
- Fault showing relative movement.
- Fault inferred.
- Fault position indefinite.
- Joint inclined.
- Joint vertical.
- Dyke.
- Section of adit.
- Anticline.

5 cm

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GEOPHOTO RESOURCES CONSULTANTS
BRISBANE AUSTRALIA

TEXINS DEVELOPMENT PTY. LTD.

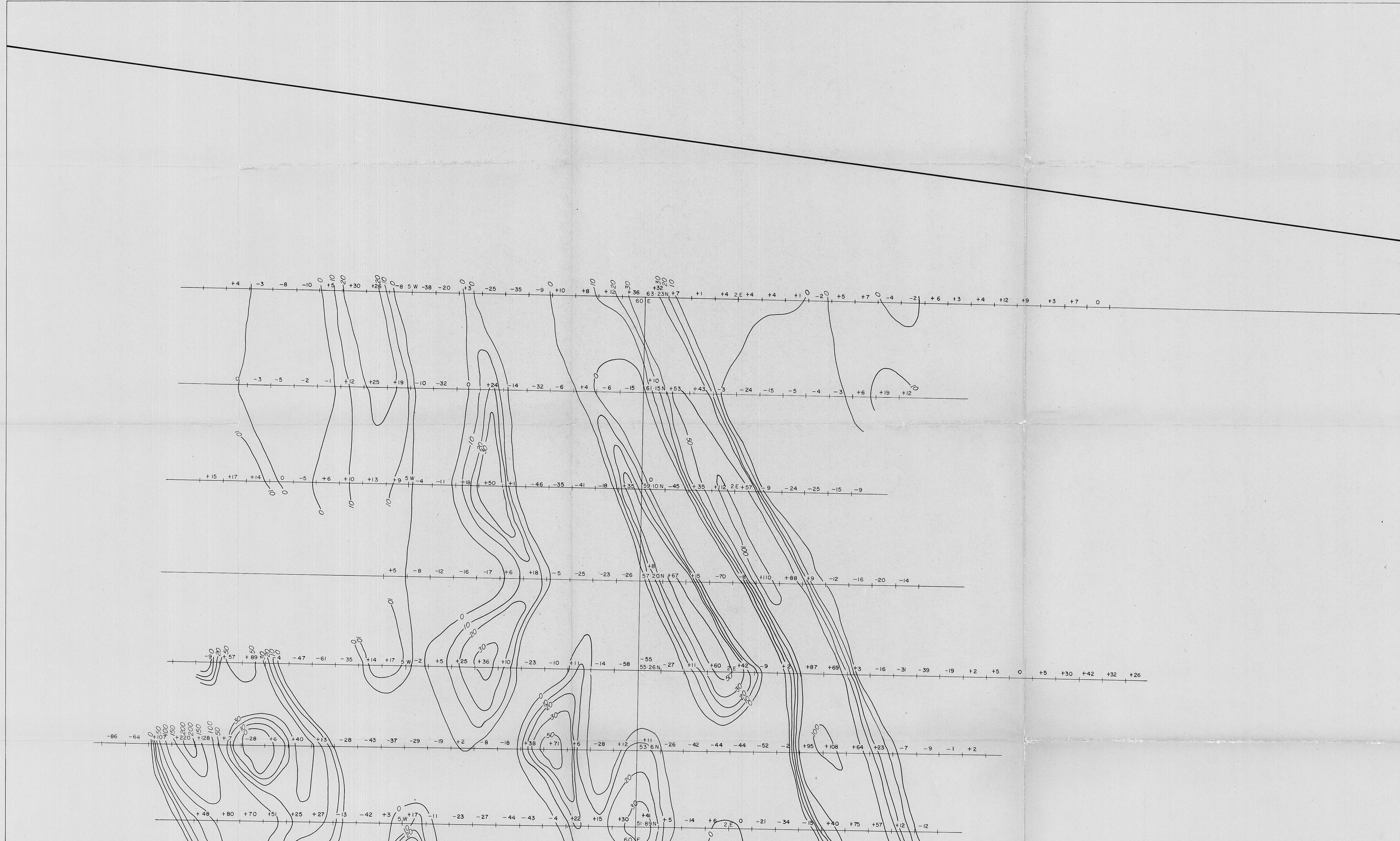
E.L.7/68 DUNDAS DISTRICT, TASMANIA

MONTEZUMA NORTH AREA

PLAN OF ADITS 1-6

2157

PROJECT	7/68	AUTHOR	W Turner	DATE	Jan 1972	DWG. Nº	1/300



SHEET INDEX

1
2
3
4

LEGEND

+87 First derivative value.

Scale: 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

808056

71-820

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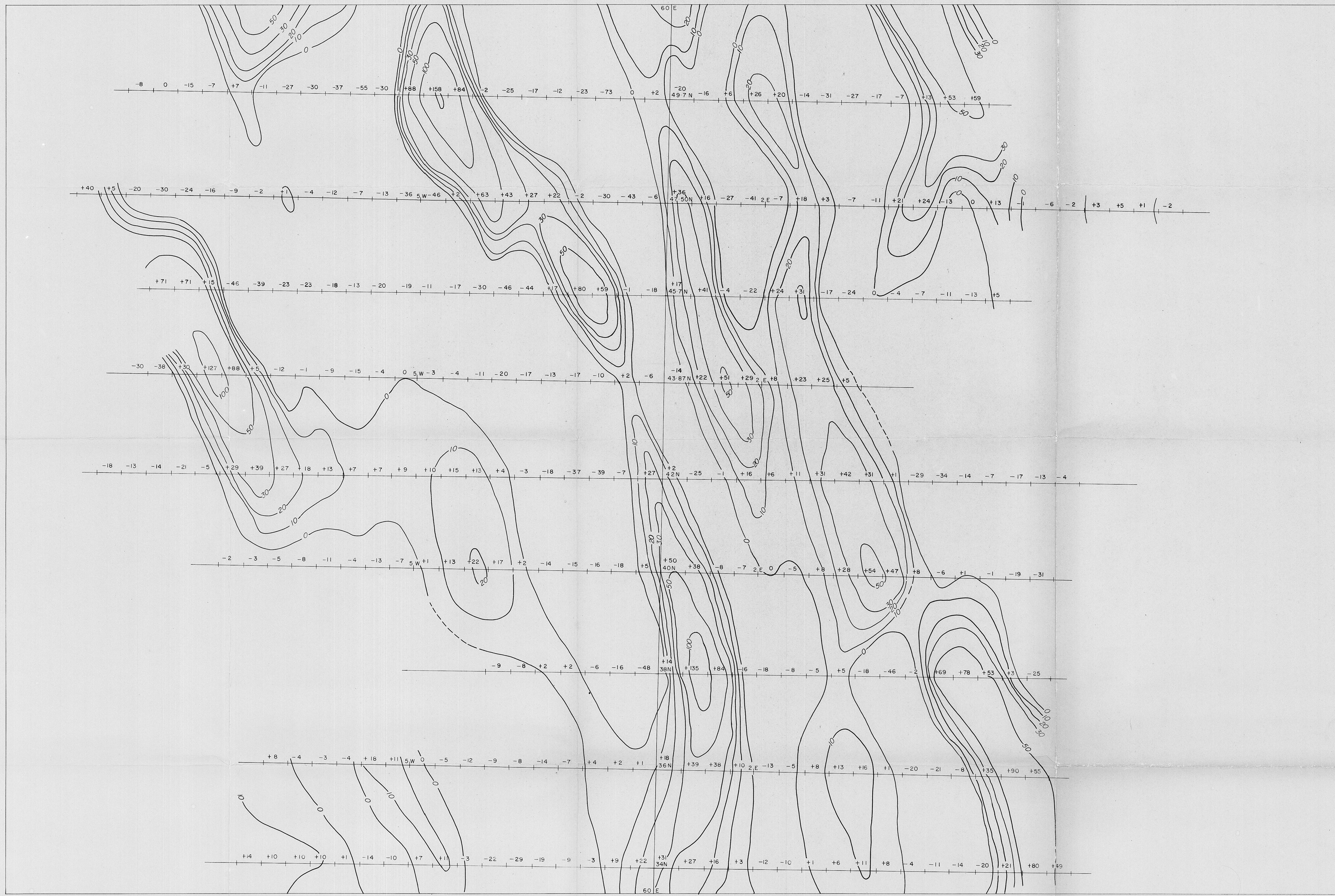
MONTEZUMA NORTH GRID V.L.F. – E.M. FIRST DERIVATIVE CONTOURS

2158

PROJECT	E.L.7/68	AUTHOR		DATE	Feb.1972	DWG Nº	1/306

SHEET 1 OF 4 SHEETS

A1-1



808057

71-820

SHEET INDEX

1
2
3
4

LEGEND

+38 First derivative value.

Scale: 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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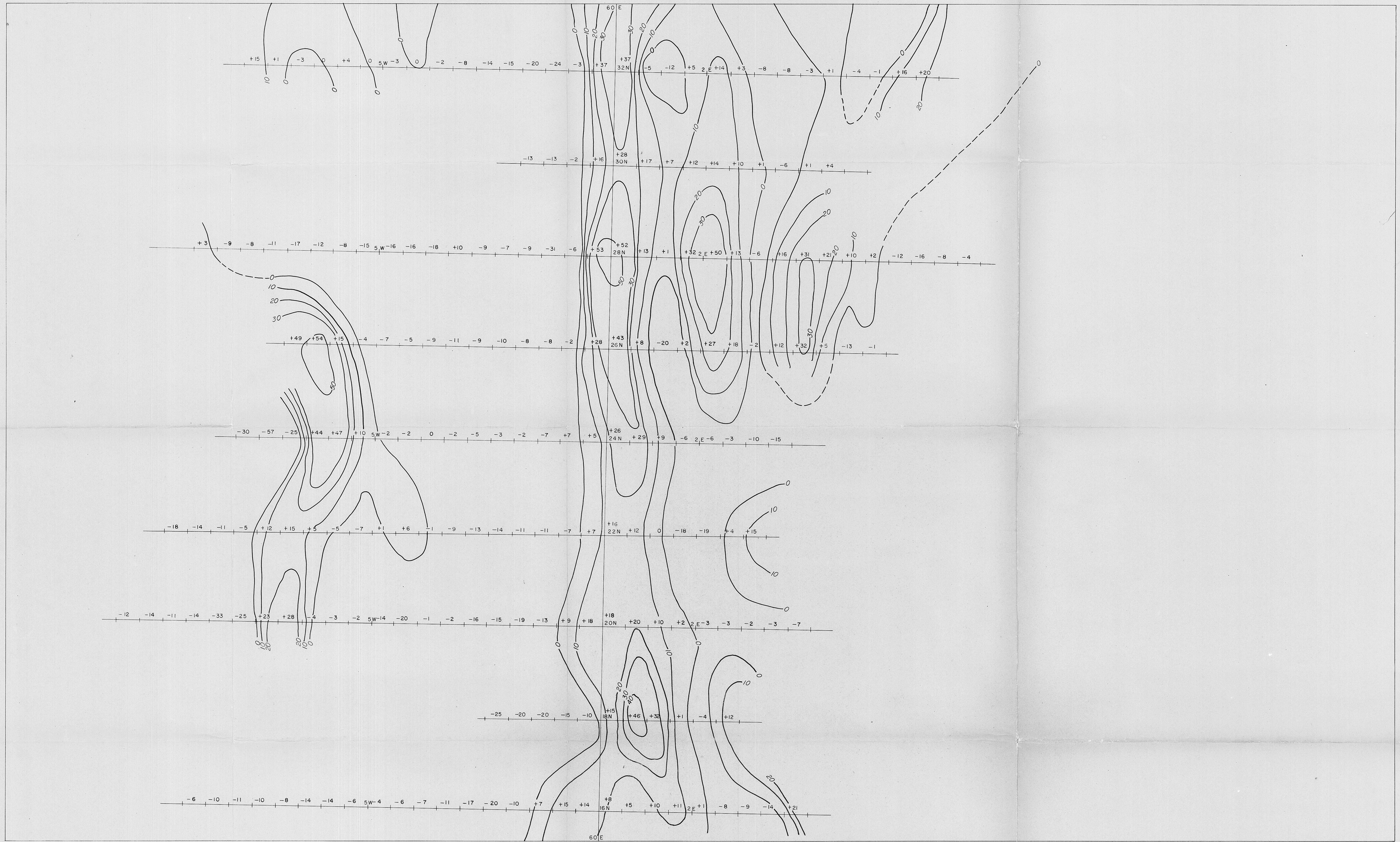
2159

PROJECT	E.L.7/68	AUTHOR		DATE	Feb. 1972	DWG Nº	1/306

SHEET 2 OF 4 SHEETS



808058

71-820

SHEET INDEX

1
2
3
4

LEGEND

+26 First derivative value.

Scale: 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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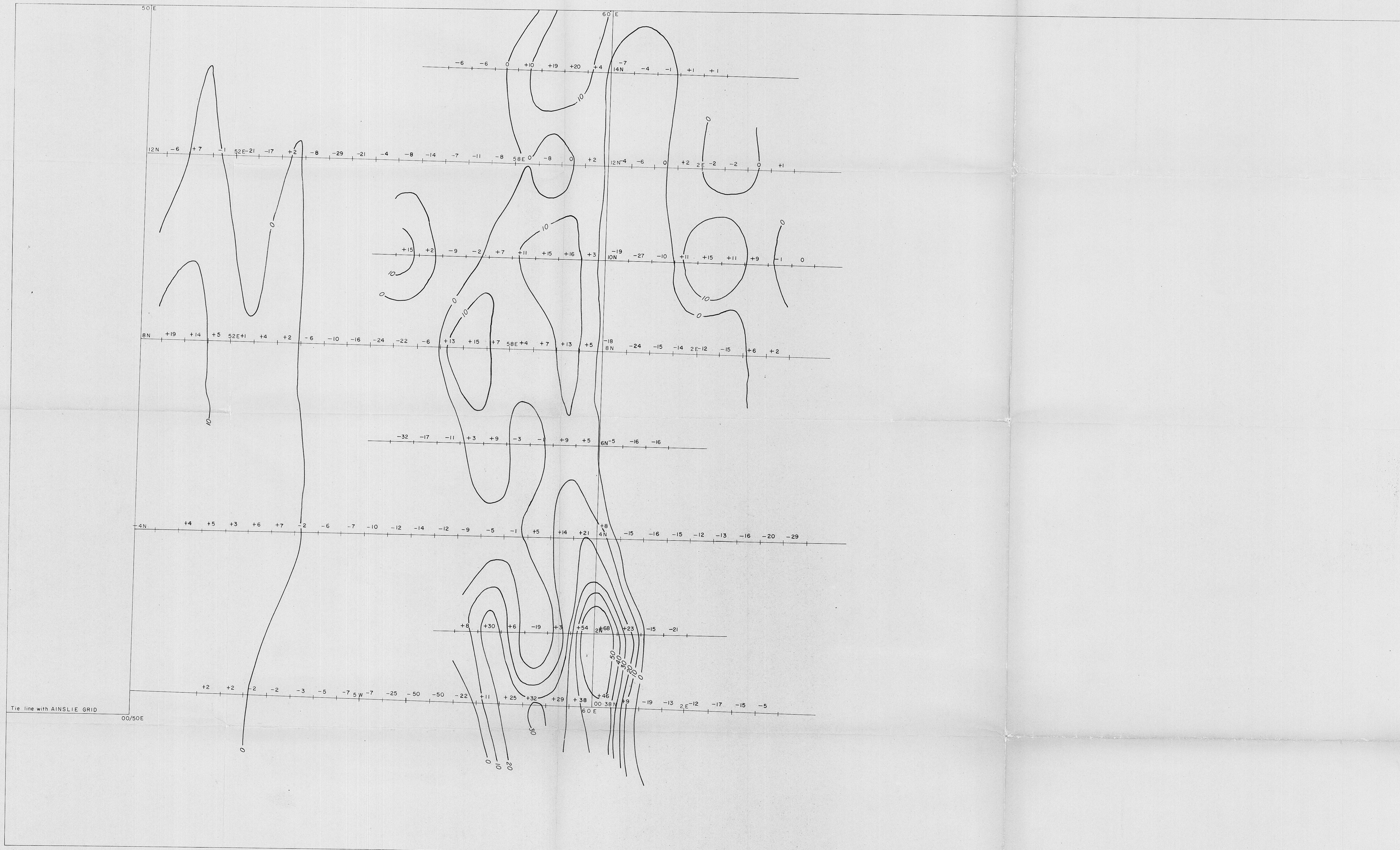
MONTEZUMA NORTH GRID V.L.F.—E.M. FIRST 2160 DERIVATIVE CONTOURS

PROJECT	E.L.7/68	AUTHOR		DATE	Feb.1972	DWG Nº	1/306

SHEET 3 OF 4 SHEETS



808059

71-820

SHEET INDEX

1
2
3
4

LEGEND

+38 First derivative value.

Scale: 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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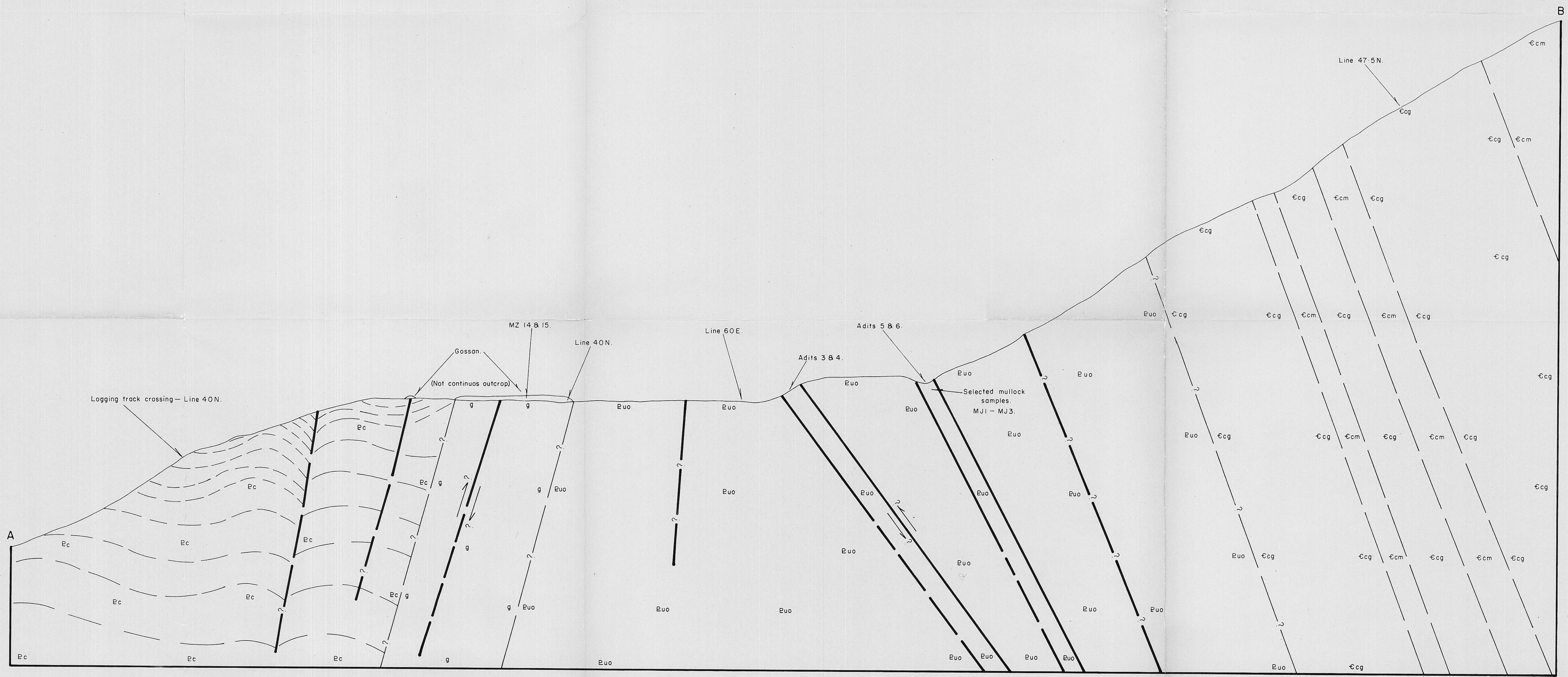
MONTEZUMA NORTH GRID V.L.F. – E.M. FIRST DERIVATIVE CONTOURS

2161

PROJECT	E.L.7/68	AUTHOR		DATE	Feb. 1972	DWG №	1/306

SHEET 4 OF 4 SHEETS



808060

71-820

LEGEND

LOWER – MIDDLE CAMBRIAN	CRIMSON CREEK FORMATION	€cm	Mauve siltstones & mudstones.
		€cg	Green & grey siltstones & mudstones, with light grey calcarenites & some limestone & chert beds.
UPPER PROTEROZOIC	OONAH FORMATION	Ꝑuo	Grey quartzite, black slate & grey micaceous quartzite.
? UPPER PROTEROZOIC	CONCERT GROUP	Ꝑc	Slate, slatey phyllite & quartzite.

g — Gossan outcrop.

Fault, dashed where indefinite, questioned where inferred.

Fault, showing relative movement.

Indefinite contact, questioned where inferred.

Trend lines.

Note :- For position of Section A–B, refer to Drawing Number 1/292.

Scale: 100 Feet to 1 Inch

100 0 100 200 300 400 Feet

50 0 50 100 Metres

5 cm

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E.L. 7/68 DUNDAS DISTRICT TASMANIA
MONTEZUMA NORTH GRID
IDEALISED VERTICAL SECTION A–B
2162

PROJECT	E.L. 7/68	AUTHOR	W. Turner.	DATE	Dec. 1971	DWG №	1/309