WELCOME NORTH MINES LTD. (N.P.L.)
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WOODSIDE PROJECT

1978

CHAPTER II

RESULTS OF GEOCHEMICAL AND GEOLOGICAL SURVEYS AND TRENCHING ON THE SOUTH ANGIE GRID - ANGIE MINERAL CLAIMS

N.T.S. 105F-15

WHITEHORSE AND WATSON LAKE MINING DISTRICTS

Latitude 61°~~5'~~50'N Longitude 132°30'W

090463

January 25, 1979

H.F. Foster
R.T. Holland

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$80,000.00

D B Craig 12 June/79

Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

E. R. BAXTER
Supervising Mining Recorder

Commissioner of Yukon Territory

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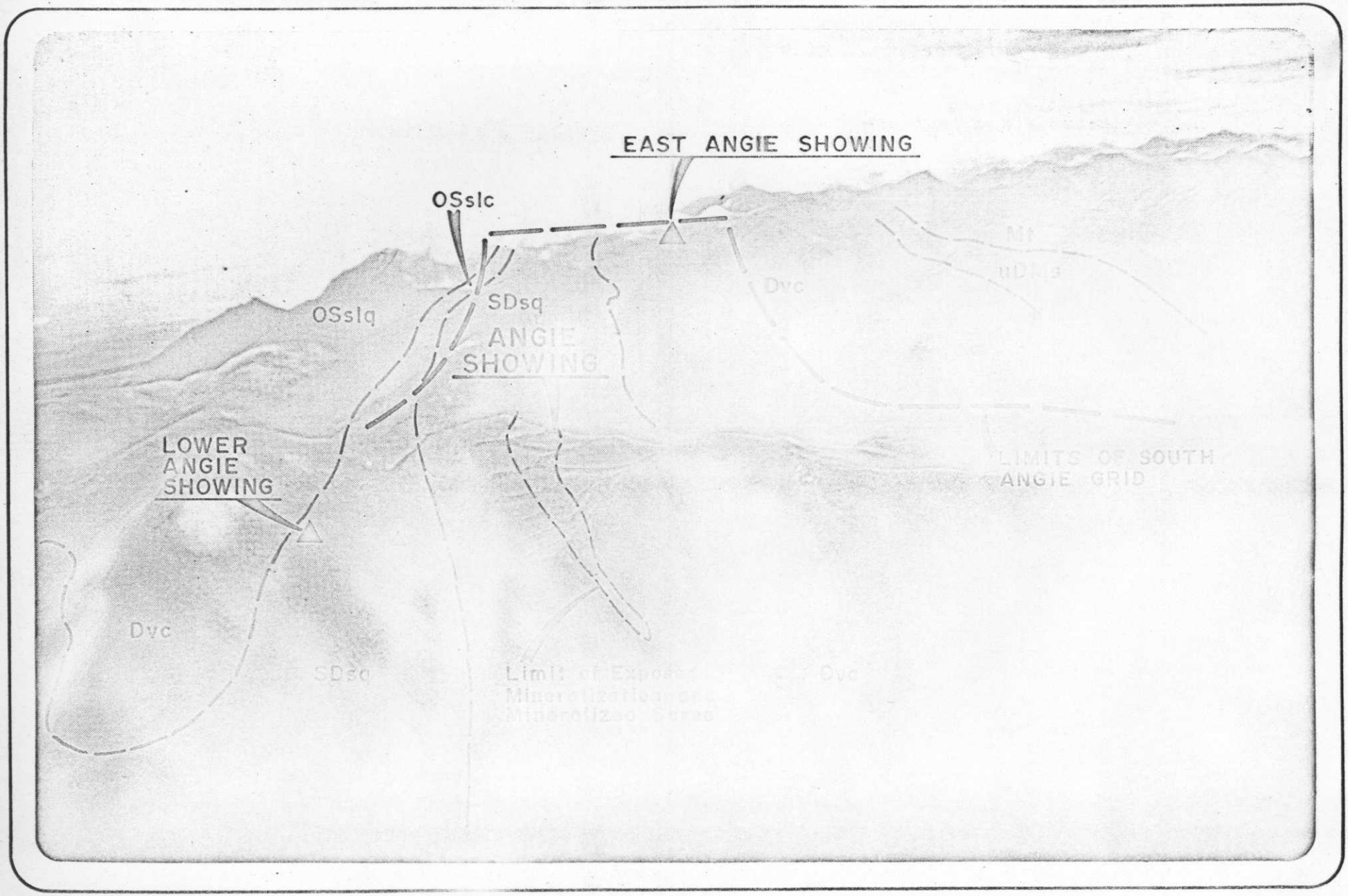
FIGURES



LOOKING SOUTHEAST TO THE ANGIE TRENCHES AND TO THE DISTANT EAST ANGIE SHOWING

VANGORDA PROJECT AREA

WOODSIDE PROJECT AREA

Irene
Bev
Eva
Mabel
Alice
Wynne
Anvil
Raz
Dot
Ruth
Grum – Vangorda
Rachel
Dy
Mn
Swim
SB
Sea
Jackie
Linda
Tar
Dev
Wet
Mag
Lou
May
Sir J.A
Piglet
Pim
G.K.
ROSS
South Angie Grid
ANGIE
EAST ANGIE
North Angie Trend
South Angie Trend
P M J Trend
CYR
ST.
RANGE
PELLY RIVER
FARO
DRURY LAKE
ROBERT CAMPBELL HIGHWAY
LITTLE SALMON LAKE
MAGUNDY RIVER
LAPIE RIVER
ROSS RIVER
CANOL ROAD
KETZIE RIVER

62°30' 62°15' 62°00' 61°45' 61°30'
134°30' 134°00' 133°30' 133°00' 132°30' 132°00' 131°30'
L8 K5 K6 K7 L1 K4 K3 K2 K1 J4 F13 F14 F15 F16 G13 F12 F11 F10 F9 G12

N

LEGEND

- Massive Sulphide Deposit
- Mineral Occurrence
- River, Creek
- Highway
- Claims:
  - Getty Mining Pacific – Welcome North Mines
  - Cyprus Anvil Mining — 1
  - Du Pont of Canada — 2
  - Utah Mines — 3
  - Cominco — 4
  - Amax Potash — 5
  - Kerr Addison Mines — 6
  - St. Joseph Exploration — 7
  - Brendex Resources — 8
  - Misc. Other

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PROJECT AREA & PROPERTY LOCATIONS

Scale 1" : 8 miles	Date Feb. 1978	NTS 105
Revised Oct. 1978	By	Fig

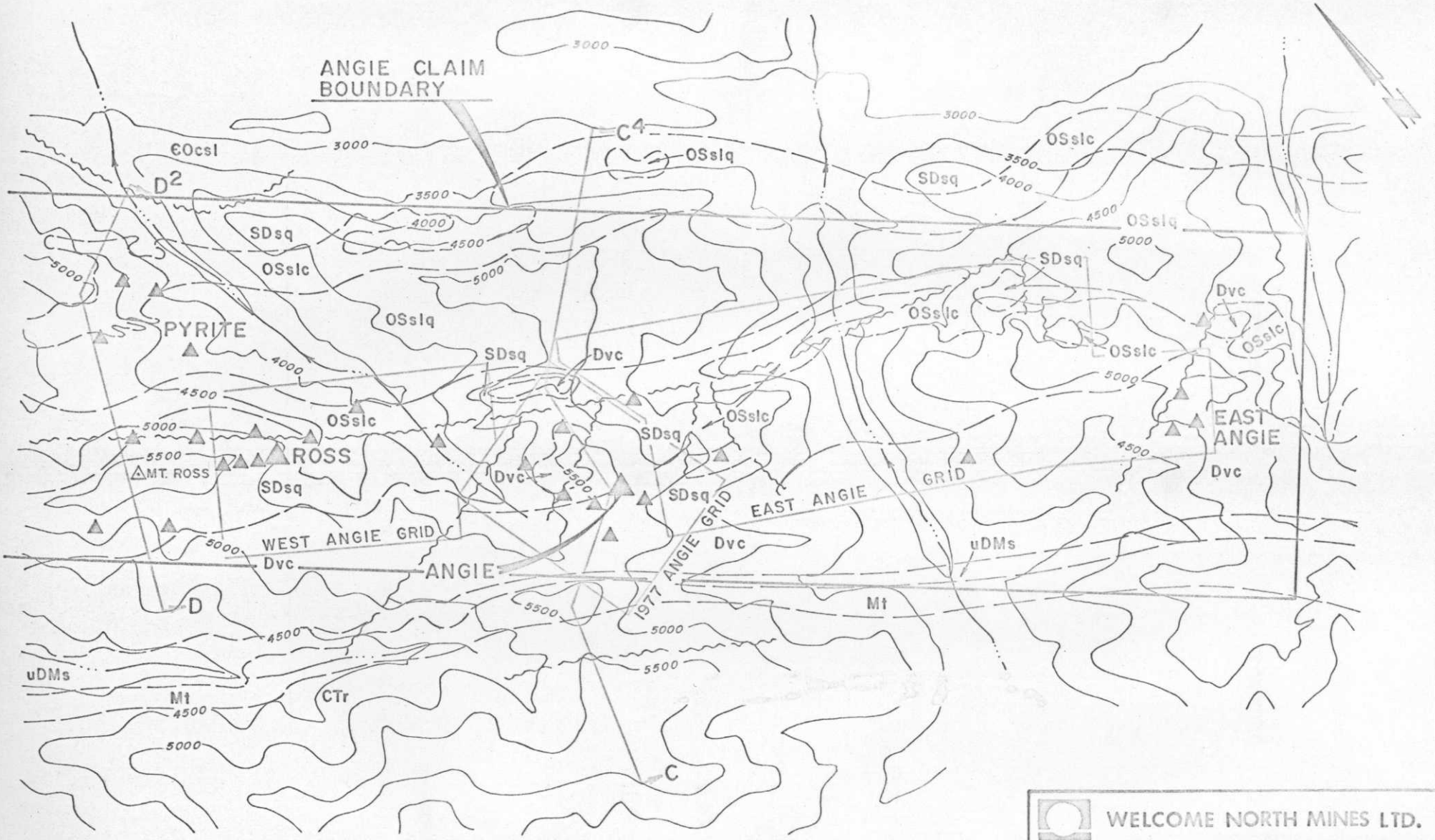
11.1 SUMMARY AND CONCLUSIONS

Welcome North Mines Ltd., as Operator of the Woodside Joint Venture, conducted surface exploration of the South Angie Trend during 1978 involving a total expenditure of some $184,000.00. The program included extensions to the pre-existing geochemical soil grids, the addition and geochemical sampling of new grids, expanded geological map coverage, test geophysical surveys and both hand and mechanical trenching of surface mineral occurrences and the detailed assessment of those occurrences.

The 1978 work successfully added to both the detailed and regional geological understanding of the metallogeny of the South Angie Trend. Geological and geochemical guidelines arrived at during the season were employed to direct the prospecting and discovery of many new showings and significant additions to showings previously known. Trenching both by hand and by bulldozer added to the dimensions of the Angie and the recently discovered Ross Showings and enabled meaningful sampling and assessment of those showings.

Work at the Angie Showing outlined a zone of erratic lenticular zinc-silver mineralization 280 meters long which contained sections of higher grade mineralization of up to 3.2 meters thick and assaying 5.8% zinc and 3.58 oz./ton silver. The zone, which occurs in limestones at the base of Dvc, has not been closed off in the northwest and geochemical anomalies there suggest potential on-strike extensions up to 600 meters.

Work at the Ross Showing led to the outlining of a 15-meter thick section of zinc-rich argillites and limestones in SDsq formation which section contained one zone of zinc mineralization assaying 4.76% zinc over 4 meters. Since the work was designed to assess thickness and grade of



NOTE

See Table 1 and Plate II–2 for Geological Legend.

See Fig. 3 and 4 for Geological Cross Sections DD2 and CC4

LEGEND

▲ Mineral Showings

▲ Major Zinc Occurrences

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WOODSIDE PROJECT
SOUTH ANGIE GRID
COMPILATION MAP

Scale: 1:50,000	Date: FEB. 1979	N.T.S. 105, F15,16
Revised:	By: R.H.	Fig. 1

the mineralization, no potential strike lengths have been determined.

Preliminary magnetic surveys at the LAF zinc occurrence 6.5 kilometers northwest of the Ross Showing delineated a significant magnetic anomaly in close proximity to minor shale-limestone hosted zinc occurrences.

Geochemical surveys over the Pyrite Occurrence[1], situated in the OSslq formation (Fig. 1) and apparently unrelated to the Ross or Angie Showings, outlined a significant coincident lead-zinc-silver anomaly which remains open to the northwest.

Results of the 1978 work, while not yet conclusive, have further refined the model of a zinc-silver rich horizon within an undulating but well defined stratigraphic section recognizable for some 20 kilometers of strike length along the South Angie Trend. It has also uncovered another potentially important stratiform zinc showing containing sub-economic grade mineralization. Further work is recommended for 1979 to continue assessment of the two occurrences found to date - the Angie and the Ross Showings. As well, follow up in other areas of interest is also recommended. Details of this work are described in the following section.

11.2 RECOMMENDATIONS

The following work is proposed for the Angie Grid Area for 1979:

1) 300 meters of diamond drilling in three holes at the Angie Showing.

   DDH 79A-1

   - Target: down-dip and along strike projections of westernmost

[1] Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 5, p. 18.

mineralization seen in Trench CT 9 which assayed 6.5% zinc and 1.3 oz./ton silver over 2.7 meters.

- Location: 1977 Angie Grid 33+00N, 7+50W. Situated in Trench CT 11.
- Dip: 45° toward 25° azimuth.
- Depth: 76 meters (250 feet).

DDH 79A-2

- Target: along strike test of continuity of presently established mineralization, the presence of which is implied by geochemical anomalies.
- Location: vicinity of 34+00N; 12+00W dependent on topographic restrictions.
- Dip: 45° towards 25° azimuth.
- Depth: 76 meters (250 feet).

DDH 79A-3

Contingent on positive results of holes 79A-1 and 79A-2 to further test continuity of mineralization.

2) Carry out follow-up prospecting of selected geochemical anomalies located on the north side of Mount Ross and immediately south of trenches situated on the south side of Mount Ross.

3) Hand trenching of selected geochemical anomalies shall be contingent on results of follow-up prospecting mentioned above.

4) Conduct detailed magnetometer surveys over two profile lines across the previously delineated magnetic anomaly at the LAF occurrence (8-6)[1] situated 6 kilometers northwest of Mount Ross, the purpose

[1] Mineral Occurrence reference number.

of which shall be to determine the nature of the causative structure (not shown in Fig. 1, see Plate 3).

5) Geological mapping and evaluation of mineral occurrence 8-36 200 meters west of the East Angie Showing.

6) Conduct detailed prospecting, geochemical silt sampling and sidehill seep sampling, and hand pitting at the Pyrite Showing in an effort to determine the source of the lead-zinc-silver geochemical anomaly outlined in 1978.

11.3 INTRODUCTION

In 1977 Getty Mining Pacific Ltd. and Welcome North Mines Ltd., acting in conjunction under the Woodside Joint Venture, began the exploration of sedimentary rocks containing anomalous base metal content within the Pelly Mountains in the central Yukon Territory. The discovery of zinc-lead-silver concentrations within these rocks led to the staking by the Joint Venture of 800 mineral claims early in the 1977 field season. The elongate northwest-trending claim group covers an area some 40 kilometers in length by 2.5 to 5 kilometers in width.

The Angie zinc-silver showing, which is among the principal mineral occurrences discovered within the block, occurs south of the Lapie River near the southeastern end of the claim group. The South Angie Trend, which includes both the Angie Showing and its on-strike projections, received considerable exploration attention during 1977 (Key Map). This exploration included geochemical surveys and geological mapping over a 27-kilometer cutline grid and subsequent hand trenching on the Angie Showing. The results of this work were sufficiently

encouraging to justify the on-going 1978 program which is the subject of this report.

The 1978 exploration program, which included extensions of the geochemical, geological and prospecting coverage, plus mechanical trenching by bulldozer of the main Angie Showing, resulted in the discovery of several new mineral showings and extensions to the known occurrences.

Development of the property is now considered sufficiently advanced to warrant diamond drill testing of selected surface occurrences along the South Angie Trend in order to examine the unweathered projections of these mineral horizons, as well as to test for continuity of grade down-dip and along strike.

Drilling is included in the recommended program proposed herein.

11.3A LOCATION AND ACCESS

The South Angie Trend Claim Group is located in the St. Cyr Range of the southern Yukon, N.T.S. 105F-15, 16 (see Key Map). The approximate center of the claim group is at 61°50'N, 132°33'W.

The northwestern boundary of the claim group can be reached by truck from Ross River on the South Canol Road, a distance of about 15 miles but best access to the property is gained by helicopter from Ross River.

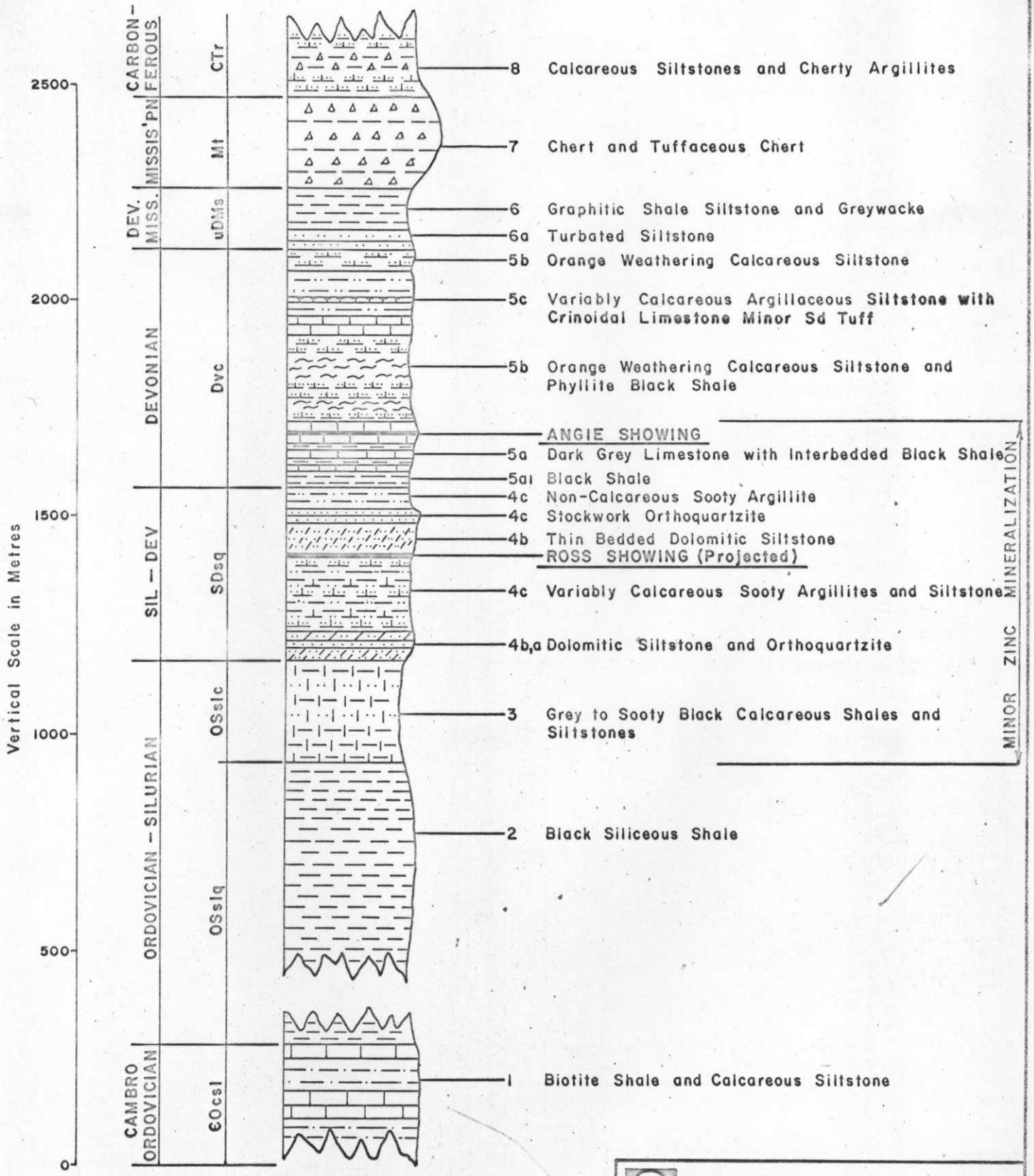
11.4 GEOLOGY

During 1978 the area of geological investigation was expanded from the 1977 Angie grid coverage to include an area approximately 18.6 kilometers by 5.4 kilometers extending southeast from the Lapie River. Plate 11-2 shows the planimetric distribution of lithologic units for the area mapped. Geological rock units used are based on 1977 mapping and on work done by Tempelman-Kluit (1977). Substantial changes have been made to the 1977 geology and this revised stratigraphy is detailed in following sections. The reader is referred to the above-mentioned Plate 11-2, to Figure 2 which shows the stratigraphic column as measured in the vicinity of the Angie Showing, and to Table I which shows overall stratigraphy of the South Angie Trend. It should be noted that the main emphasis of work was concentrated in areas of most significant mineralization and as a result geological interpretations in areas distal to these showings may be sketchy and incomplete.

Discussion on regional geology and stratigraphy can be found in Chapter 4 "Regional Geology St. Cyr Range". Of particular note in this chapter is Table I on page 4, "Stratigraphic Correlations in the St. Cyr Range", which shows regional stratigraphy including those units found within the area of this report. Discrepancies between unit descriptions in this table and those in Chapter 11 are due to regional variations in lithologies and to the more detailed work conducted on the South Angie Trend area.

11.4.1 Stratigraphy

A total of eight recognizable stratigraphic units have been mapped within the South Angie Trend area, ranging from Cambrian to Carboniferous in age as determined by Tempelman-Kluit (1977). Where possible these units have been further subdivided according to lithologies as shown in Figure 2 and Table I.



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WOODSIDE PROJECT

SOUTH ANGIE GRID

DETAILED STRATIGRAPHY

Scale: 1:12500	Date: FEB. 1979	N.T.S. 105 F/15
Revised:	By: R.H.	Fig. 2

TABLE I
TABLE OF FORMATIONS FOR THE SOUTH ANGIE TREND

Carboniferous		
Csl	Unit 8	- calcareous siltstones and silty limestones with interbedded cherty argillites
Mississippian		
Mt	Unit 7	- chert and tuffaceous chert
Upper Devonian-Mississippian		
uDMs	Unit 6	- graphitic black shales, siltstones and greywackes; 6a turbated siltstone
Devonian		
Dvc	Sub-unit 5a	- dark grey limestone and black shales; $5a_1$ predominantly black shales
	Sub-unit 5b	- orange weathering calcareous grey siltstones; phyllitic black shales
	Sub-unit 5c	- variably calcareous argillaceous grey siltstones with massive crinoidal limestones
	Sub-unit 5d	- orange brown weathering tuffs and tuffaceous siltstones
	Unit 5	- undifferentiated Dvc
Silurian-Devonian		
Sdsq	Sub-unit 4a	- massive stockwork orthoquartzite
	Sub-unit 4b	- thin bedded dolomitic grey siltstones
	Sub-unit 4c	- variably calcareous sooty argillites and siltstones
	Unit 4	- undifferentiated SDsq
Ordovician-Silurian		
OSslc	Unit 3	- grey to sooty black calcareous shales and siltstones; minor sooty black non-calcareous shales
OSslq	Unit 2	- rusty to black weathering graphitic, siliceous and pyritic shales
Cambrian-Ordovician		
€Ocsl	Unit 1	- biotitic shales and calcareous siltstones

a) Cambrian-Ordovician

Unit 1 - €Ocs1 - Red unit

Unit 1 is made up of lithologies similar to those which host lead and zinc mineralization at the Sunset and Sir John A. showings 45 kilometers to the northwest[1] and is probably age equivalent. Within the South Angie Trend this unit consists of two rock types, 1) calcareous siltstone and 2) non-calcareous shale, both of which are variably biotitic.

The siltstone member is usually massive to faintly thin laminated, buff weathering and strongly calcareous with biotite occurring as fine purple disseminations and as biotite-rich laminae. Biotite content is variable and often absent as are the laminations. These laminae when present often weather out corrugated with the lighter more calcareous laminae being recessive.

The shale facies occurs as dark grey to slightly rusty orange weathering, fine grained, fissile but resistant rock which is generally a dark purplish color often with thin grey laminae. Biotite is found mainly as fine disseminated specks and is usually present in amounts up to 10%.

The occurrence of unit 1 rocks is restricted to the area in the vicinity of lower Cominco Creek where it is found in apparent fault contact with Silurian-Devonian strata. As this area is off the claim block and away from the main areas of interest it received only passing attention. As a result the relationship of the two lithologies is not known. It would appear likely however that they are thickly interbedded.

[1] Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 6, PMJ Trend.

b) Ordovician-Silurian

Unit 2 - OSslq - Black Siliceous

"Black Siliceous" is a term coined by Tempelman-Kluit (pers. comm.) to describe an extensive unit of siliceous, graphitic and pyritic shales and slates. Within the South Angie Trend these rocks occur as moderately resistant, rusty black weathering, fissile, non-calcareous graphitic black shales. Quartz sweats are abundant and fine disseminated pyrite is usually present in minor amounts. Locally pyrite content can increase to greater than 10% such as has been previously described at the Pyrite Showing on Cominco Creek[1]. Such areas within creeks are readily distinguishable as large gossanous stains on rocks and more noticeably on permanent or semi-permanent snow patches. None of these pyritic zones appear to have any appreciable base metal content.

Within Cominco Creek the upper section of unit 2 consists predominantly of massive to fissile quartzites, calcareous siltstones and minor amounts of phyllitic shale. This appears to be a localized phenomenon, the extent of which is uncertain due to complex shearing and folding of these rocks.

The contact between unit 1 and unit 2 is not well exposed in this area due to faulting. However, mapping elsewhere in the St. Cyr Range[2] has indicated this to be conformable.

1 Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 5, Angie Grid Area.

2 Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 4, Regional Geology.

c) Ordovician-Silurian

Unit 3 - OSslc - Black Sooty

Conformably overlying unit 2 shales is an estimated 200-meter thick sequence of recessive grey to sooty black weathering, weak to strongly calcareous dark grey to black siltstones and shales. Minor interbedded rusty black weathering non-calcareous black shales were also observed. Unit 3 rocks are generally thin bedded to occasionally massive, fissile, variably graphitic and commonly contain abundant quartz sweats and veining. Strongly graphitic (sooty) phases tend to be zinciferous with localized, erratically distributed occurrences of "zapping stone" which contain abundant hydrozincite stain and minor amounts of rusty orange smithsonite.

Unit 3 occurs as two structurally related bands separated by shales of unit 2 (see geological cross-section Fig. 3 for structure). The northernmost of these bands is on the whole distinctly less graphitic than its southern equivalent, suggesting a gradational decrease in organic content to the northeast. Zinc content is also noticeably decreased to the northeast, with fewer and less extensive showings reported.

d) Silurian-Devonian

Unit 4 - SDsq - Mount Ross Quartzite

The Silurian-Devonian section, named for its quartzite exposure on Mount Ross, consists of a variable sequence of quartzite, dolomitic siltstones, calcareous siltstones and sooty argillites. These have been partitioned into three sub-units which are detailed below. Thickness of this section, which conformably

overlies Black Sooty rocks, varies dramatically from less than 50 meters to in excess of 700 meters with a postulated average thickness of approximately 400 meters. Preliminary indications are that this unit is thinning to the southeast and may pinch out off the map area.

Sub-unit 4a - orthquartzite

The most characteristic member of unit 4 is a massive quartz stockwork grey orthoquartzite which occurs as relatively thin bands and lenses within more abundant dolomitic siltstones. The quartzite is generally found as resistant, blocky outcrops which are grey to orange weathering, and weakly to moderately calcareous. This unit is best delineated in the Ross and Angie Showings areas. Elsewhere it is undifferentiated from sub-unit 4b.

Sub-unit 4b - dolomitic siltstones

The siltstones of this sub-unit are by far the most abunddant and extensive member of the Siluro-Devonian package. They consist primarily of tan weathering, thin bedded, platy, grey to dark grey, non-calcareous, dolomitic rocks which are locally argillaceous and weakly calcareous. Interbeds of calcareous grey siltstones, limestones and minor sooty black shales are also present along with the previously mentioned orthoquartzite.

Several minor zinc occurrences were noted within these siltstones, the most significant of which is scattered breccia fillings of smithsonite on the north side of Mount Ross (Showing 8-35). However, economic mineral potential of this unit appears to be poor.

Sub-unit 4c - sooty siltstones, argillites, limestones and shales

Sub-unit 4c consists of a wide range of lithologies from calcareous dark grey siltstones and limestones to non-calcareous black argillites and shales. Most of these rocks are also weakly sooty.

The occurrence of these lithologies appears to be restricted, for the most part, to the area between Mount Ross and Angie Ridge. At Mount Ross the rocks are mainly tan weathering (sooty on unweathered surfaces) platy calcareous siltstones and limestones, locally baritic with lesser amounts of non-calcareous graphitic shale. On Angie Ridge this horizon is largely sooty black non-calcareous argillites with thin interbeds of variably calcareous siltstones and thicker pods of massive, grey weathering, quartz stockwork limestone. At this locality sub-unit 4c appears to grade upwards into silty limestones of unit 5.

Sub-unit 4c is the host for numerous zinc showings including the Ross Showing, which occurs at the contact with sub-unit 4b, and possibly the Lower Angie Showing, which in addition to zinc also contains significant amounts of copper in the form of malachite, azurite and tetrahedrite.

e) Devonian

Unit 5 - Dvc

Conformably overlying unit 4 is a package of shales, limestones, calcareous siltstones, and tuffs estimated to be approximately

550 meters thick. Four sub-units have been distinguished largely as a result of work done in the Angie Ridge-Mount Ross area. These are detailed in the following sections.

Sub-unit 5a - silty limestone and black shale

The lower part of the Devonian is made up of grey to buff weathering, thin bedded to massive, dark grey to black, silty limestone. Interbedded with the limestone on a scale of millimeters to meters are black to silver-grey weathering, strongly fissile, often phyllitic black shales with locally abundant fine orange ankerite-quartz sweats. This sub-unit is host to many of the more significant zinc showings including the Angie, East Angie and possibly the Lower Angie Showings.

At the Angie Showing, within this section is a thick limestone member which contains very fine shaly laminae giving the limestone a shaly parting. These shaly bands are host to smithsonite mineralization and the limestone is referred to as the 'Angie limestone' (see Angie cross-sections, Fig. 6 to 13). At both the Angie and East Angie Showings the shale horizon forms a mappable lithology underlying the main sub-unit 5a horizon. This shale horizon has been denoted as sub-facies $5a_1$ (see Fig. 5, Detailed Stratigraphic column, Angie Showing).

Sub-unit 5b - orange weathering calcareous siltstones and phyllitic black shales

This facies differs from sub-unit 5a in that the siltstones are orange weathering, strongly fissile, thin laminated and often weakly phyllitic. The shales in general are more

phyllitic than their 5a equivalent and locally contain abundant disseminated limonite-replaced euhedral porphyroblast up to 0.5 centimeters in size. The proportions of siltstone to shale are variable from siltstone predominant south of Mount Ross, at the East Angie Showing, to equal proportionated at the Angie Showing, to shale dominant in Laf Creek.

No mineralization has been found in this horizon. However due to its distinctive outcropping nature, uniform composition, and its close proximity to mineralized horizons, sub-unit 5b is an important stratigraphic marker horizon. It also represents the termination of zinc mineralizing processes with only one minor zinc occurrence being found within younger rocks in this area.

Sub-unit 5c - argillaceous siltstones with crinoidal limestone

The siltstones of sub-unit 5c are recessive dirty grey weathering, massive to fissile, variably calcareous, dark grey argillaceous rocks which contain massive pods of medium to coarse grained recrystallized limestone with lesser massive crinoidal limestone. The limestones appear to be concentrated into distinct zones or bands within the siltstone horizons. In the vicinity of the Angie Showing this zone occurs at the base of sub-unit 5c and is contained within a massive resistant phase of the siltstone. Sub-unit 5c is not well exposed distal to the Angie Ridge area.

Sub-unit 5d - tuffs and tuffaceous siltstones

Tuffaceous rocks within the Devonian section occur only to the southeast of the Angie Showing area. On Angie Ridge one thin band of tuffaceous siltstone was mapped within sub-unit 5c rocks. This consisted of a fissile, rusty weathering calcareous, dolomitic siltstone with abundant round green clasts (volcanic fragments?), silty clasts and fine disseminated rusty specks. Also observed within this area are pink weathering, flaky white tuffs, also with green clasts.

South of the East Angie Showing, two to three thick bands of resistant orange weathering, massive, creamy brown to pale green, rhyolite tuffs occur. These appear to be stratigraphic equivalents to the Angie tuff horizon and suggest a thickening of volcanic horizon to the southeast.

f) Upper Devonian-Mississippian

Unit 6 - uDMs - Black Clastic

The Black Clastic unit occurs as a relatively thin horizon, less than 150 meters thick. It is composed mainly of interbedded rusty black weathering fissile graphitic black shales, siltstones and more competent massive black greywackes, with minor amounts of black chert. Pyrite content is locally high resulting in gossanous zones within creeks similar to those found within unit 2 rocks.

Blue-grey turbated siltstones containing fine shaly wisps were found along Angie Ridge and have been tentatively

included in unit 6 due to the presence of minor black chert. This siltstone horizon has been labelled sub-facies 6a and has not been observed elsewhere.

g) Mississippian

Unit 7 - Mt

The pale greenish-grey tuffaceous cherts, previously described within the 1977 Angie grid area[1], can be traced to the northwest into Laf Creek where they become rusty weathering, thin bedded multicolored chert with minor shale and siltstone interbeds. Colors vary from pink, and maroon, to creamy yellow and pale green. The thickness of unit 7 is estimated to be 200 meters.

h) Carboniferous

Unit 8 - Csl

The main occurrence of unit 8 is at the headwaters of Laf Creek where it consists of brown weathering variably calcareous, massive to thin bedded grey siltstones, which are locally turbated. These are interbedded with rusty weathering thin bedded poorly fissile greyish-white to pale maroon colored cherty argillites. Grey silty limestones and chloritic shales mapped in 1977[2] are now believed to be part of Csl also.

11.4.2 Structure

For the most part, the lithologies of the South Angie Grid areas trend northwest-southeast. Repetition of section is caused by

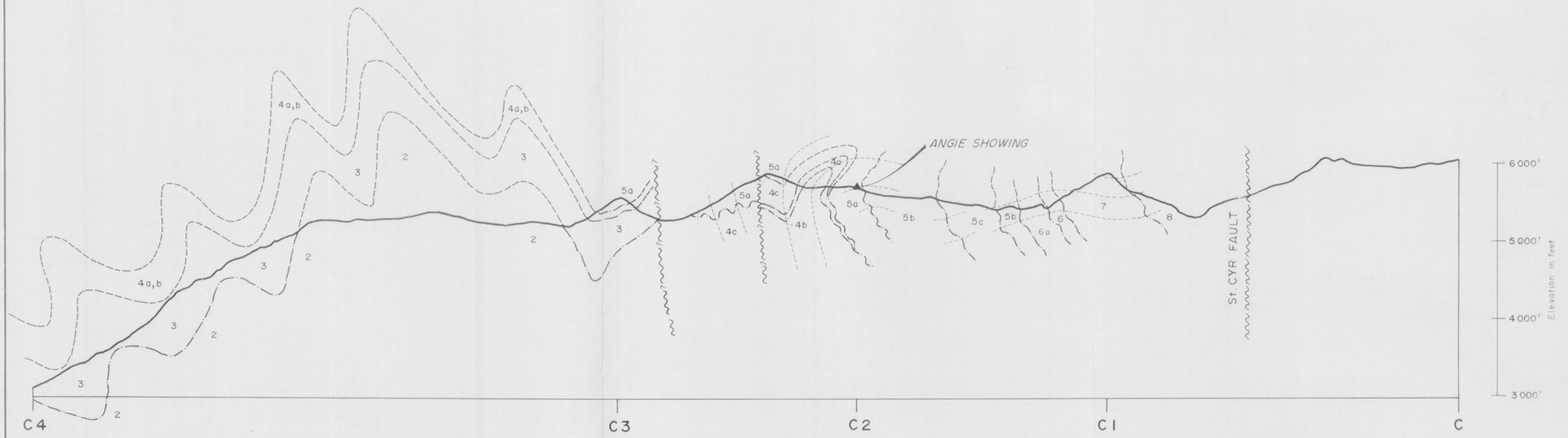
[1, 2] Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 5, Angie Grid Area.

folding about a nearly horizontal axis, also northwest-trending. Measurements and orientations of axial plane cleavages have indicated refolding of the first phase folds about a similar axis. Figures 3 and 4 show gently folded first phase axial plane cleavages which are locally tightly folded and overturned as postulated for the Angie Showing area (Fig. 3). A third phase of folding perpendicular to the first two phases gently warps the previous fold axis. This folding contains minor localized tighter folds.

Faulting appears to be quite prominent in this area. Three large scale strike-slip faults have been mapped parallel and are probably related to the Tintina Fault system just to the northeast. The more southerly of these faults is believed to be part of the St. Cyr Fault mapped by Tempelman-Kluit (1977) as having major displacement.

Small scale east-west trending block faulting is also common. Displacement seems to be vertical and faults appear to be cut off by the larger strike-slip faults, particularly in the area just north of the Angie Showing. It is suggested that this block faulting is contemporaneous with or predates the strike-slip movement.

In the vicinity of Red Creek (Plate II-2), large thicknesses of Ordovician-Silurian shales were found to lie unconformably directly beneath Devonian stratigraphy. It is suggested that this is due to thrust faulting similar to that mapped by Tempelman-Kluit (1977) further to the south within the Pelly Mountains. This thrust faulting has not been extrapolated to the northwest, however it should be noted, in light of recent uncertainties over



Looking Southeast

SYMBOLS

- ASSUMED FAULT
- FIRST GENERATION AXIAL PLANE CLEAVAGE
- GEOLOGICAL CONTACT (EXISTING, ERODED)

NOTE : FOR LOCATION AND GEOLOGICAL LEGEND SEE PLATE II-2

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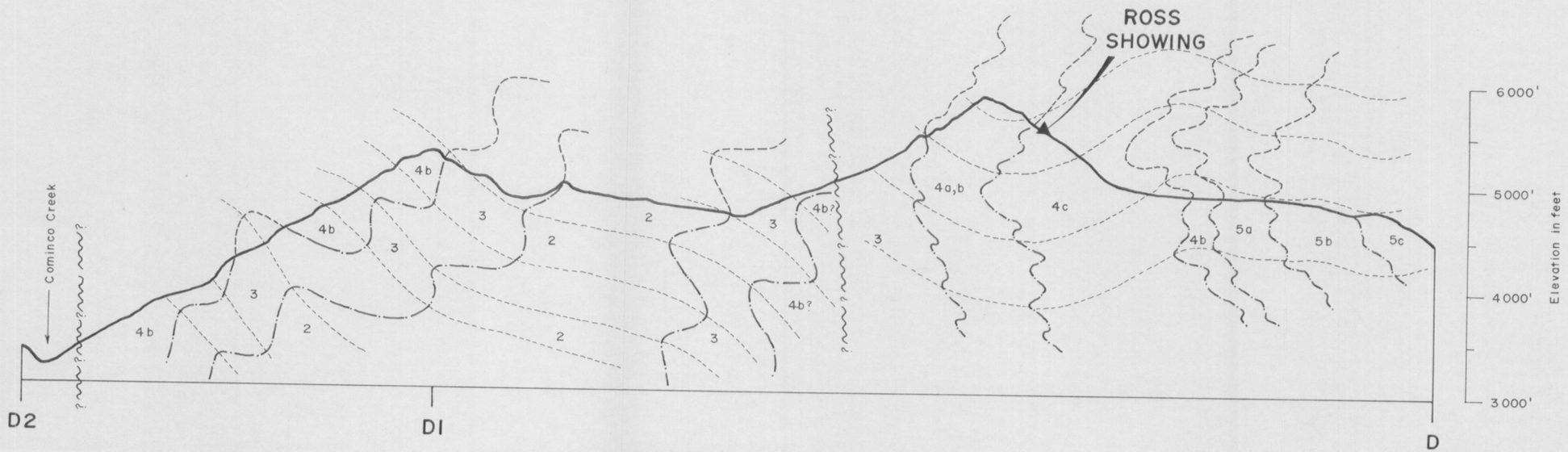
WOODSIDE PROJECT
SOUTH ANGIE GRID
GEOLOGICAL CROSS SECTION C-C4

Scale 1:2000	Date: JAN. 1979	NTS 105 F 15
Revised:	By: Holland/Foster	Fig. 3



Looking Southeast

SYMBOLS

- ASSUMED FAULT
- FIRST GENERATION AXIAL PLANE CLEAVAGE
- GEOLOGICAL CONTACT (EXISTING, ERODED)

NOTE : FOR LOCATION AND GEOLOGICAL LEGEND SEE PLATE II-2

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GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
GEOLOGICAL CROSS SECTION D-D2

Scale 1:12000	Date: JAN. 1979	N.T.S. 105 F 15
Revised:	By: Holland/Foster	Fig. 4

the age and stratigraphic position of unit 2[1], that this fault may extend across the map sheet along the contact between unit 2 and unit 3 to the south.

11.4.3 Mineralization

Exploration within the South Angie Grid Area during 1977 and 1978 resulted in the discovery of two important zinc-silver occurrences, the Angie Showing and the Ross Showing. These, in addition to numerous other related occurrences, have been found within a package of Ordovician-Silurian-Devonian rocks some 1300 meters in thickness (Fig. 2). Mineralization, which occurs heterogeneously throughout the package, generally increases in concentrations toward the top of that package.

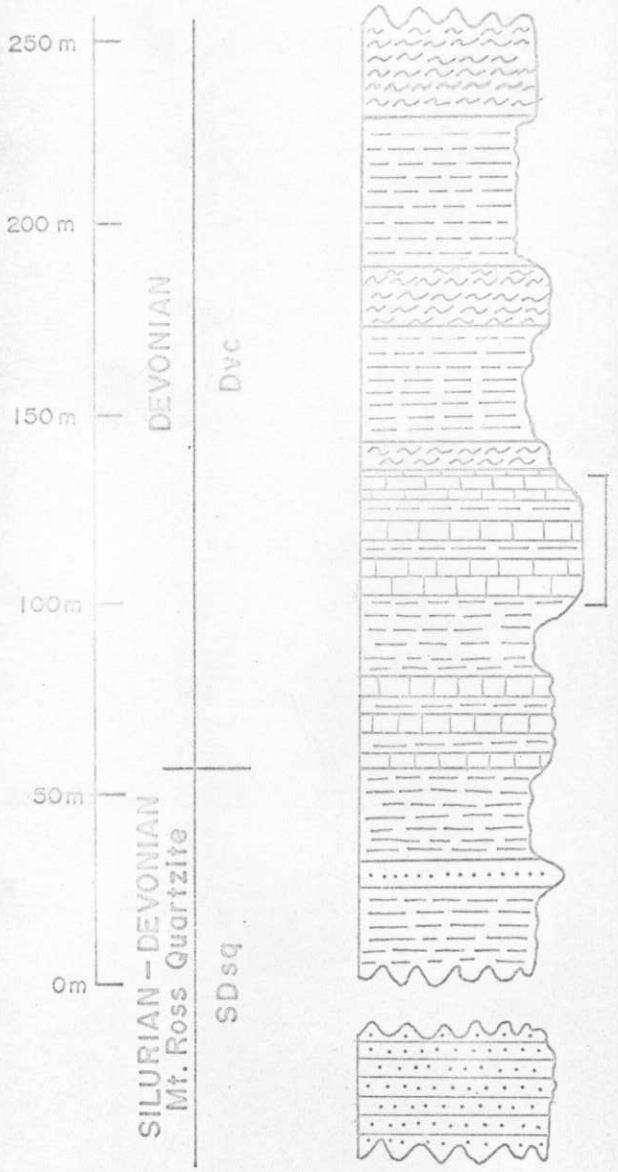
The strongest mineralization, namely that found at the Angie and the Ross Showings, occurs near the base of unit Dvc and in the top half of unit SDsq (Fig. 2). These showings, which have been the subject of most detailed work to date, are described below.

a) Angie Showing

Geological mapping carried out in 1978 at the Angie Showing, the results of which are illustrated on Plates 11-3 and 11-4, and Figures 5 to 13, did not reveal any new styles of mineralization. Zinc-silver mineralization occurs as pelletoid disseminations concentrating in bands parallel to bedding and as replacement and vein fillings in cross-cutting veinlets believed secondary to the main mineralizing event[2].

1 Chapter 4 of this report; Regional Geology St. Cyr Range, Section 4.2.3.

2 For more detailed descriptions see Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, Chapter 5, p. 16.



5b1 – RUSTY WEATHERING PLATY PHYLLITIC GREY LIMESTONE

5b2 – RUSTY–BLACK WEATHERING, STRONGLY FISSILE PHYLLITIC BLACK SHALE

5b1 – PHYLLITIC GREY LIMESTONE

5b2 – PHYLLITIC BLACK SHALE

5b1 – PHYLLITIC GREY LIMESTONE

5a3 – GREY TO BUFF WEATHERING DARK GREY LIMESTONE WITH SHALEY PARTINGS :
Contains interbands of smithsonite bearing black shaley siltstone

5a1 – RUSTY BLACK SHALE (NOT PHYLLITIC)

5a2 – INTERBEDDED AND INTERLAMINATED PHYLLITIC BLACK SHALE AND RUSTY WEATHERING DARK GREY LIMESTONE

5a1 – BLACK RUSTY SHALE AND PHYLLITIC SHALE (GRADATIONAL WITH ABOVE) – may contain limestone interbeds

4a – MASSIVE GREY QUARTZITE

5a1 – RUSTY BLACK SHALE (SAME AS ABOVE)

4a – MASSIVE SDsq QUARTZITE :
May contain black shale interbeds

NOTE : FOR LITHOGRAPHIC SYMBOLS SEE APPENDIX I

WELCOME NORTH MINES LTD.

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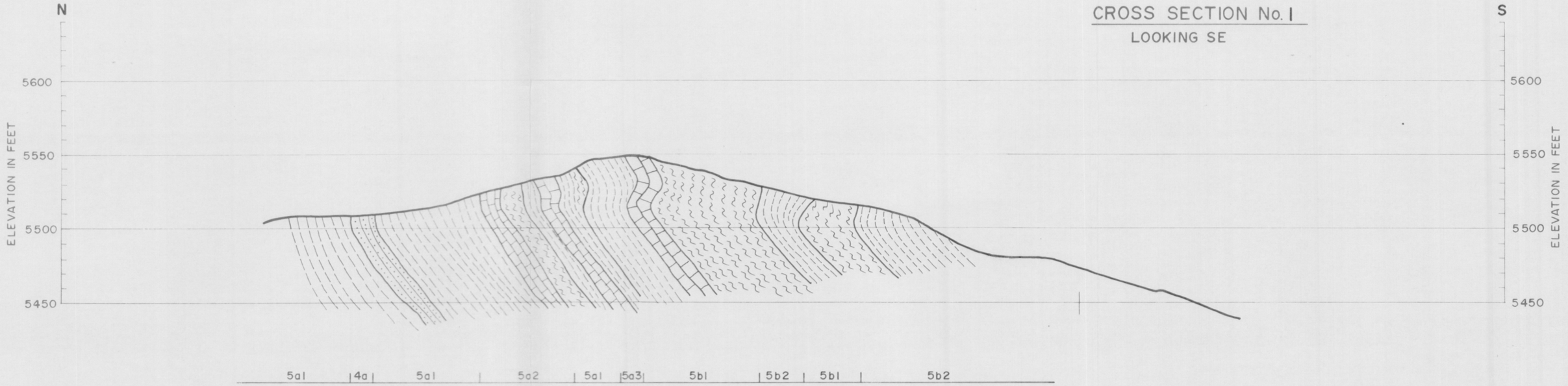
WOODSIDE PROJECT
SOUTH ANGIE GRID
DETAILED STRATIGRAPHIC COLUMN
Angie Showing

Scale: 1:2,000	Date: OCT. 1978	N.T.S. 105 F/15
Revised:	By: B. Holland	Fig. 5

CROSS SECTION No. I

LOOKING SE



NOTE: FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

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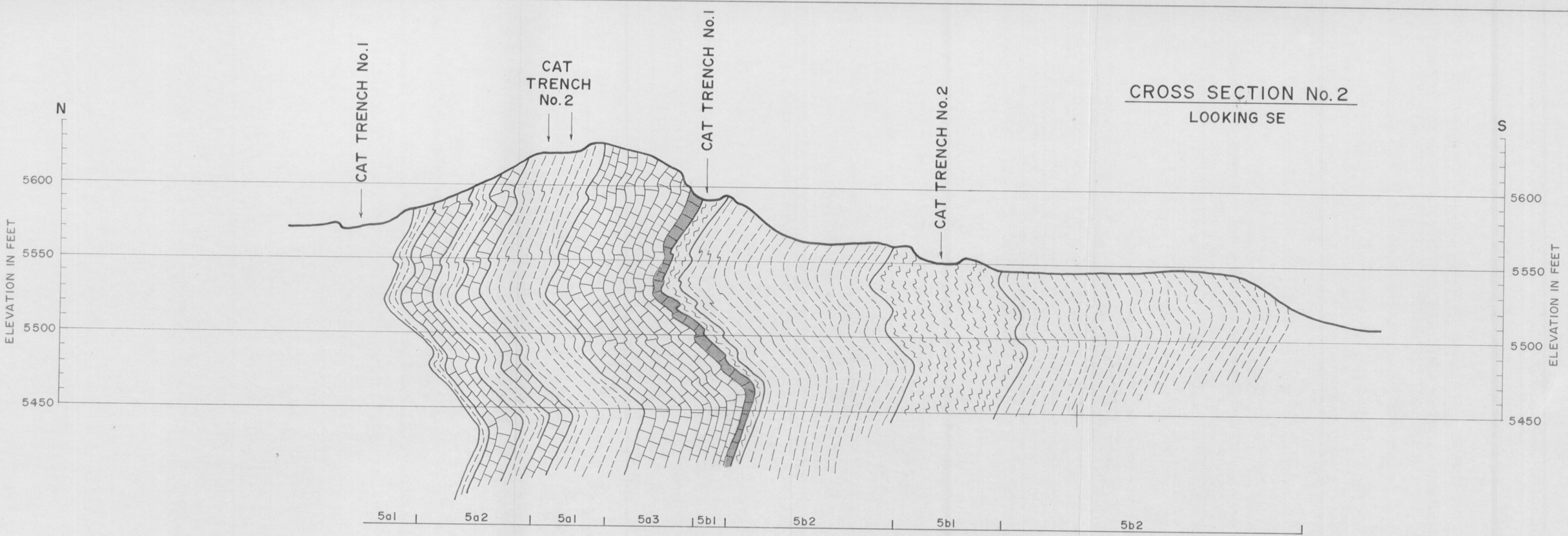
WOODSIDE PROJECT

SOUTH ANGIE GRID-ANGIE SHOWING

CROSS SECTION No. I

Scale 1 : 600	Date OCT. 1978	NTS 105 F/15
Revised	By F. FOSTER	Fig 6

CROSS SECTION No. 2
LOOKING SE



NOTE : FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

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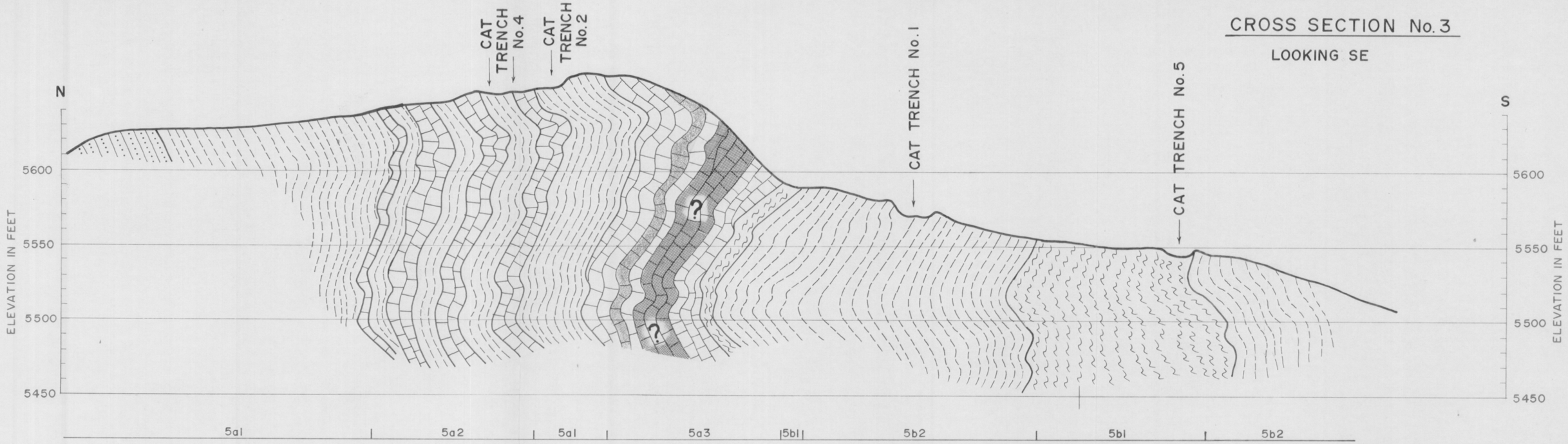
WOODSIDE PROJECT
ANGIE TREND
CROSS SECTION No.2

Scale 1 : 600	Date: OCT. 1978	N.T.S. 105 F/15
Revised:	By: F. FOSTER	Fig. 7

CROSS SECTION No.3

LOOKING SE



Zone of assayable Mineralization

Zone of visible Mineralization

NOTE : FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

WELCOME NORTH MINES LTD.

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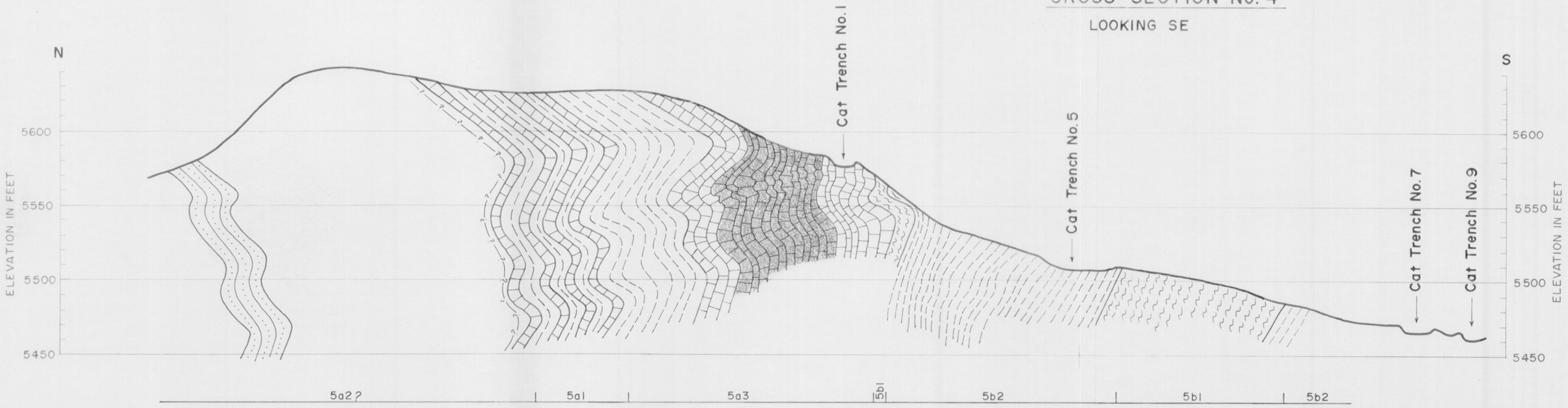
WOODSIDE PROJECT
ANGIE TREND
CROSS SECTION No.3

Scale 1 : 600	Date: OCT. 1978	NTS 105 F/15
Revised:	By: F. FOSTER	Fig. 8

CROSS SECTION No. 4

LOOKING SE



Zone of visible Mineralization

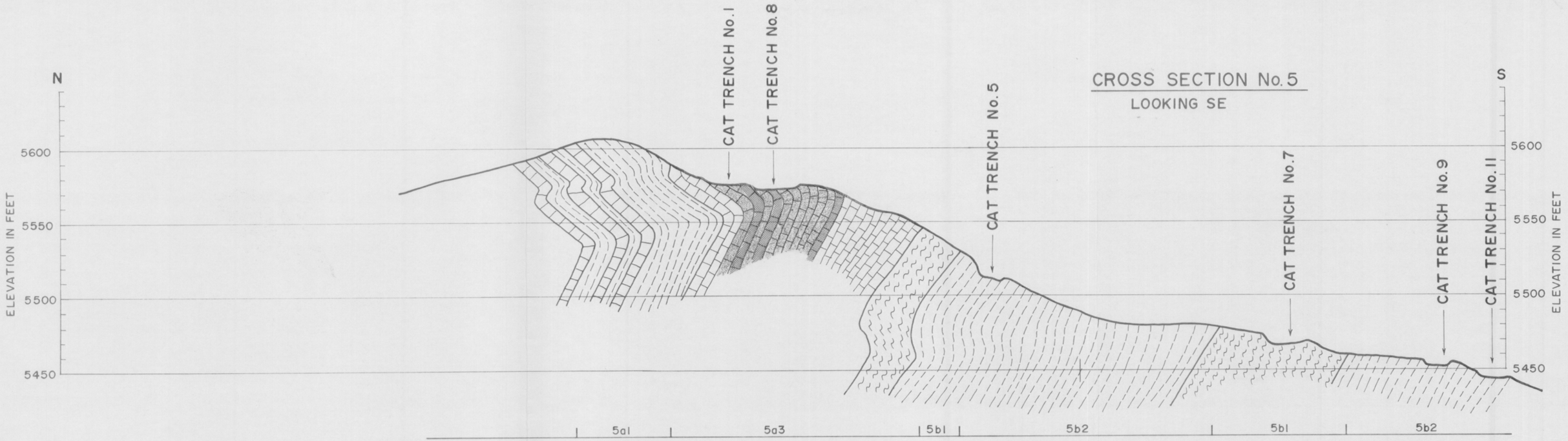
NOTE: FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
ANGIE TREND
CROSS SECTION No. 4

Scale 1 : 600	Date: OCT. 1978	N.T.S. 105 F/15
Revised:	By: F. FOSTER	Fig. 9



NOTE : FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

WELCOME NORTH MINES LTD.

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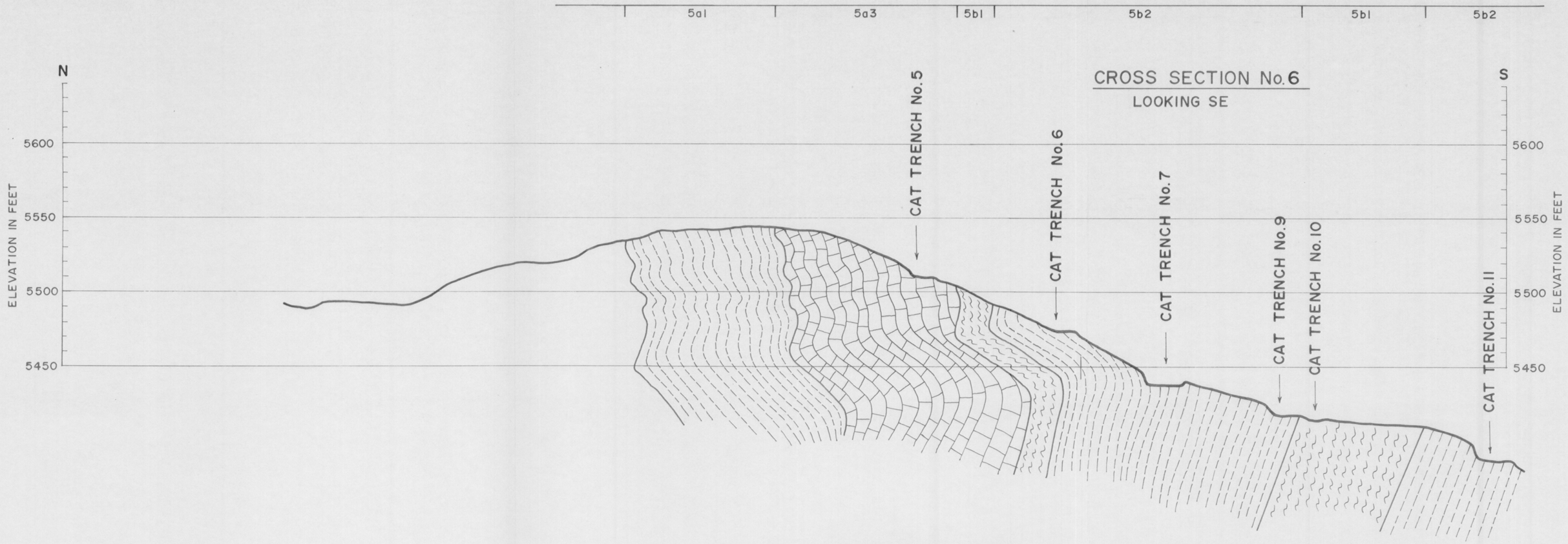
WOODSIDE PROJECT
SOUTH ANGIE GRID-ANGIE SHOWING
CROSS SECTION No. 5

Scale 1 : 600	Date: OCT. 1978	N.T.S. 105 F/15
Revised:	By: F. FOSTER	Fig. 10



NOTE : FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

WELCOME NORTH MINES LTD.

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WOODSIDE PROJECT

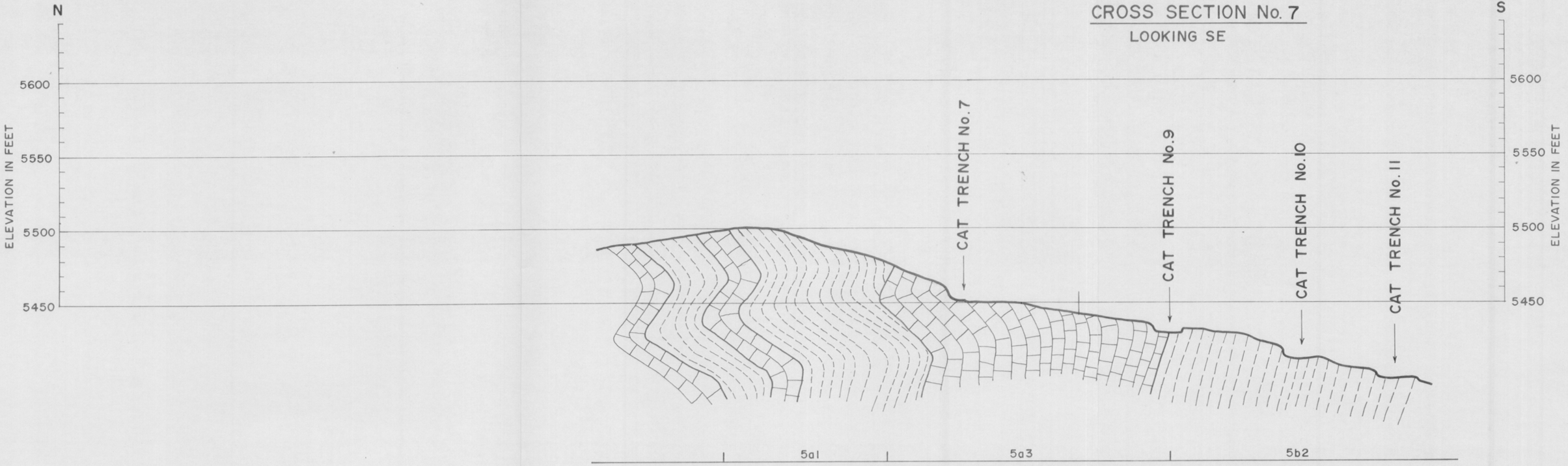
SOUTH ANGIE GRID-ANGIE SHOWING

CROSS SECTION No.6

Scale 1 : 600	Date OCT. 1978	NTS 105 F/15
Revised:	By: F. FOSTER	Fig. 11

CROSS SECTION No. 7

LOOKING SE



NOTE: FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

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WOODSIDE PROJECT

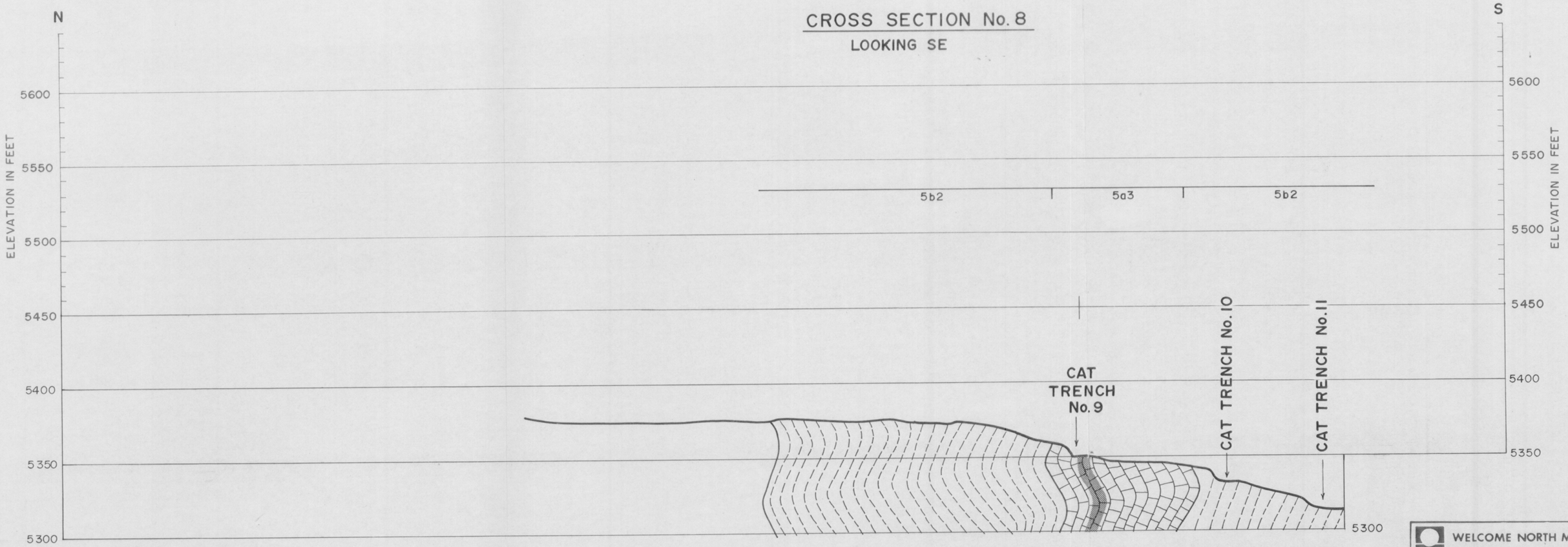
SOUTH ANGIE GRID-ANGIE SHOWING

CROSS SECTION No. 7

Scale 1 : 600	Date: OCT. 1978	N.T.S. 105 F/15
Revised:	By: F. FOSTER	Fig. 12

CROSS SECTION No. 8

LOOKING SE



Zone of assayable Mineralization

NOTE: FOR LOCATION AND GEOLOGY SEE PLATES II-3 & II-4
FOR LITHOLOGIC SYMBOLS SEE APPENDIX 1

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WOODSIDE PROJECT
ANGIE TREND
CROSS SECTION No. 8

Scale: 1 : 600	Date: OCT. 1978	N.T.S. 105 F/15
Revised:	By: F. FOSTER	Fig. 13

The mineralization occurs consistently in non-calcareous, black, shaly siltstone which is interbedded with grey, silty limestone (Angie Limestone, Fig. 5).

Exposure by cat trenching[1] in 1978 revealed that the mineralization is apparently lenticular, stratiform but stratigraphically transgressive, and variable in width along strike, a geological interpretation of which is shown on Plate II-4 and Figures 6 to 13.

b) Ross Showing

Mineralization at the Ross Showing occurs on a steep south-facing scree slope (Fig. 14) and according to structural interpretations presented in Fig. 4, lies stratigraphically above a thick section (50 meters?) of massive quartz vein stockwork orthoquartzite (sub-unit 4a). It occurs mainly in interbedded shale, argillite, siltstone, and silty limestone of sub-unit 4c as described in Figures 15 and 16, two sections measured in the showing area.

The argillites and siltstones of sub-unit 4c at the Ross Showing contain thin (1-2 millimeters) partings of friable carbonaceous black shale which impart a sooty appearance to freshly exposed outcrops of these lithologies.

Hydrozincite and smithsonite mineralization occur as coatings mainly on fractures and bedding plane partings in the argillites, however, some smithsonite can be seen as disseminations within the argillites. Quartz veins parallel to bedding, which appear to partially replace the argillite, contain coarse

[1] For details and assays see Section II.5 Trenching.

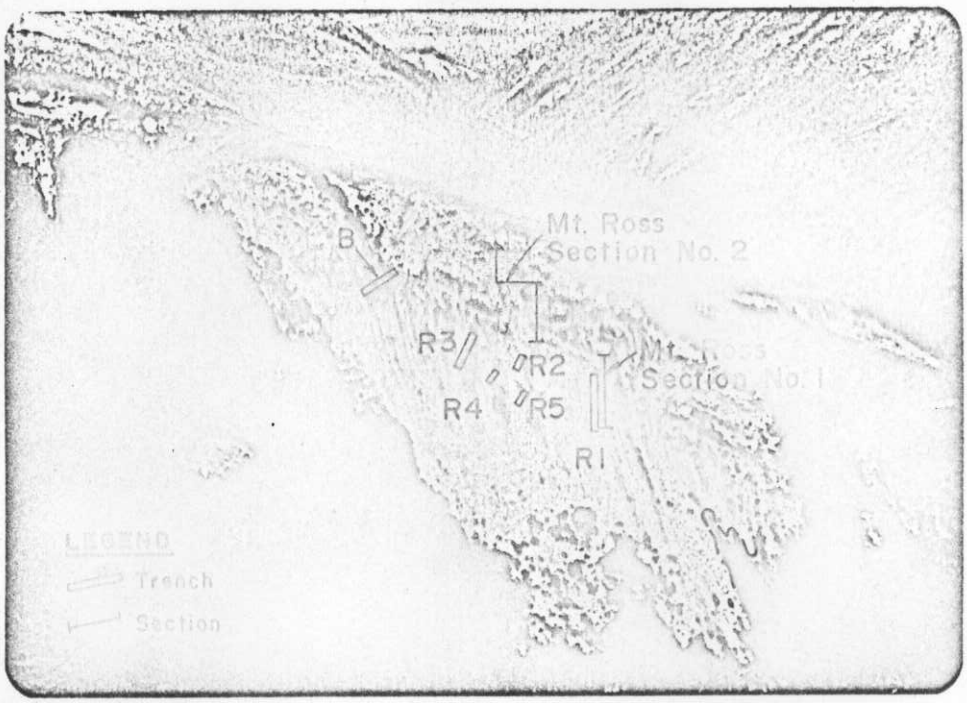
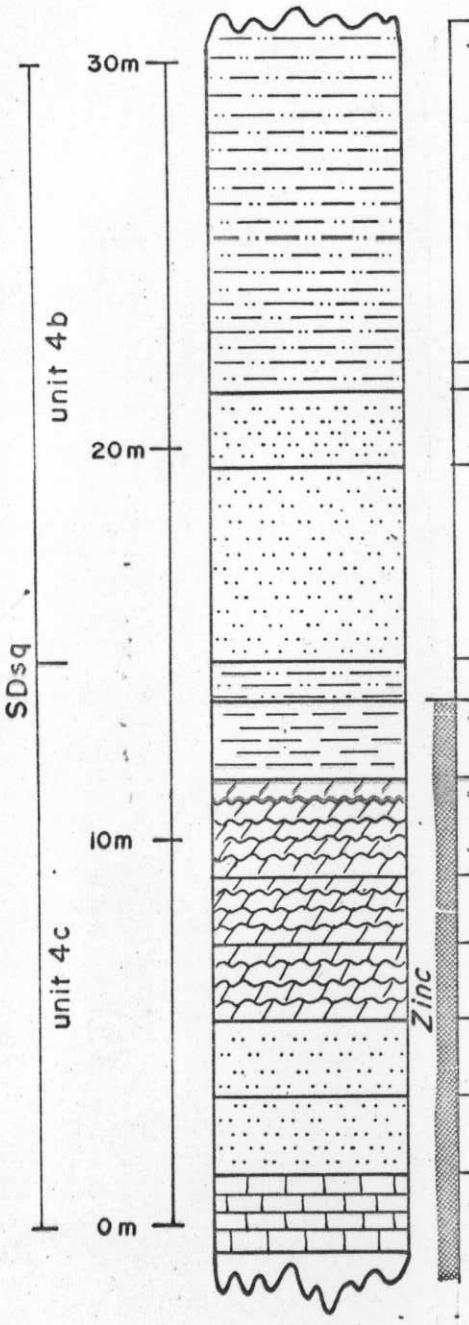


Fig. 14. View of the Ross Showing and trenches illustrating the location of the two measured sections shown in Fig. 15 and 16. Looking north.



← Sooty-grey weathering, calcareous, poorly sorted, dirty black siltstone, interbedded (on scale 0.3-3cm) with sooty weathering, poorly indurated, dark grey to black shale, minor pyrite in fractures — 1 to 2% over lower 1m.

← 10-25 cm of non-calcareous siltstone with carbonate-barite? stringers.

← Buff-weathering, sooty black dolomitic siltstone with interbeds of similar, but massive siltstone - dewatering cleavage?

← Well sorted, hard, light grey quartz siltststone with interlaminated (0.1 - 0.5 cm) dark grey, poorly sorted, soft, dolomitic siltstone.

← Interbedded brown-black, calcareous siltstone and shale (similar to 22-30m)

← Sooty weathering, friable, calcareous, graphitic, zinciferous, brown-black shale with minor siltstone laminations - minor smithsonite.

← Sooty weathering, thin laminated (≤ 1mm), zinciferous, shaley black argillite interbedded (≤ 1cm) with soft, sooty black shale - minor smithsonite and sphalerite?

← Sooty zinciferous argillite (similar to 10-12m), minor shale, smithsonite and sphalerite? + in fractures-wispy barite.

← Similar to 8-10m, with interbeds (3-10cm) of calcareous siltstone.

← Limestone-zinc bands (0.3m); smithsonite in fractures and laminations, interbedded with bedded (1-2cm), light grey sandy siltstone and black argillite - minor smithsonite.

← Thin bedded, dark gray, calcareous siltstone with light grey calcareous laminae and interbedded (4-6cm); silty limestone - - minor smithsonite and copper stain.

← Grey weathering, faintly laminated, dark gray, silty limestone - - minor smithsonite.

NOTE: 1.) SECTION MEASURED IN Mt. Ross TRENCH R-1

2.) FOR LOCATION SEE FIG. 14

3.) FOR GEOLOGICAL LEGEND SEE FIG. 2

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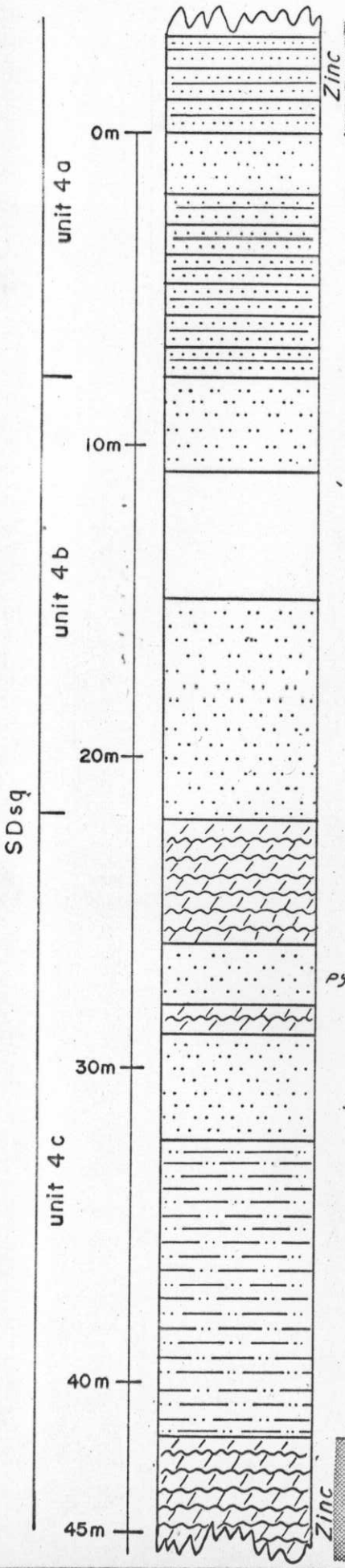
WOODSIDE PROJECT
SOUTH ANGIE GRID
Mt. Ross Section No.1

Scale: AS SHOWN	Date: NOV. 1978	N.T.S. 105 F 15
Revised:	By: R.H., F.F.	Fig. 15



← Massive, coarse grained, light grey, siliceous stockwork quartzite, with traces of smithsonite in quartz filled fractures

← Fine-grained, fissile, weakly calcareous, grey siltstone with light grey siltstone laminations and an interbed of massive quartzite 12-20cm thick.

← Massive quartzite with minor interbeds (4-10cm) of dirty siltstone.

← Tan weathering, fissile, weakly calcareous, grey, slightly graphitic siltstone, with thin, light-grey siltstone laminations, thin interbeds of quartzite (2-10cm)

← NO OUTCROP

← Same as 8-11m - quartzite interbeds 1-2cm, calcareous siltstone interbeds <1cm; massive quartzite bed 25cm thick, minor pyrite in siltstone.

← Tan weathering, strongly fissile, weakly calcareous, weakly baritic? fine grained, dolomitic, sooty black argillite.

← Interlaminated (0.2-1cm) dolomitic grey siltstone and weakly calcareous black argillite; minor pyrite on fractures.

← Dolomitic, dark bluish-grey silty argillite, platey

← Buff weathering, flaggy, dolomitic, dark-grey siltstone with occasional interbeds (5cm) of fissile black shale.

← 20cm of rusty weathering, pyritic siltstone.

← Dark, grey-weathering, fissile, dolomitic, sooty black shale interbedded (0.5-5cm) with grey weathering, platey grey siltstone.

← Rusty-orange weathering, finely laminated, fetid cherty argillite baritic band - light grey; cherty argillite bands - dark grey; minor smithsonite on fractures.

Note: 1) For location see fig. 14
2) For geological legend see fig 2.

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WOODSIDE PROJECT
SOUTH ANGIE GRID
Mt. Ross Section No.2

Scale: AS SHOWN	Date: NOV. 1978	N.T.S. 105 F 15
Revised:	By: R.H., F.F.	Fig. 16

(5 millimeter) irregular blebs of smithsonite and fragments of mineralized argillite (Fig. 17).

The highest concentrations of zinc mineralization were found in limestone interbeds up to one meter in thickness which contain 13.75% zinc over one meter of true thickness at one location in the showing area (Fig. 35 in Section 11.5.2). Smithsonite and hydrozincite occur in these limestones as cavity fillings and interstitial groundmass around breccia fragments (Fig. 18). Brecciation is restricted to the limestone beds and is believed to be primarily a sedimentary brecciation resulting from soft sediment and semi-consolidated sediment slumping.

Up to 1% barite, first noted in the zinciferous limestone interbeds at the Ross, appears to be closely associated with the zinc mineralization.

Copper mineralization present in the form of azurite, malachite, and chalcopyrite, and silver mineralization in the form of tetrahedrite, occur in accessory amounts as blebs and disseminations in high temperature tourmaline-siderite-quartz boudins and veins in the orthoquartzite underlying the Ross Showing, implying that stratigraphic mineralogical zoning may be present.

Current evidence at the Ross Showing suggests that the mineralization is of an epigenetic nature, however initial ground preparation for mineralizing solutions appear to have been a synsedimentary event.

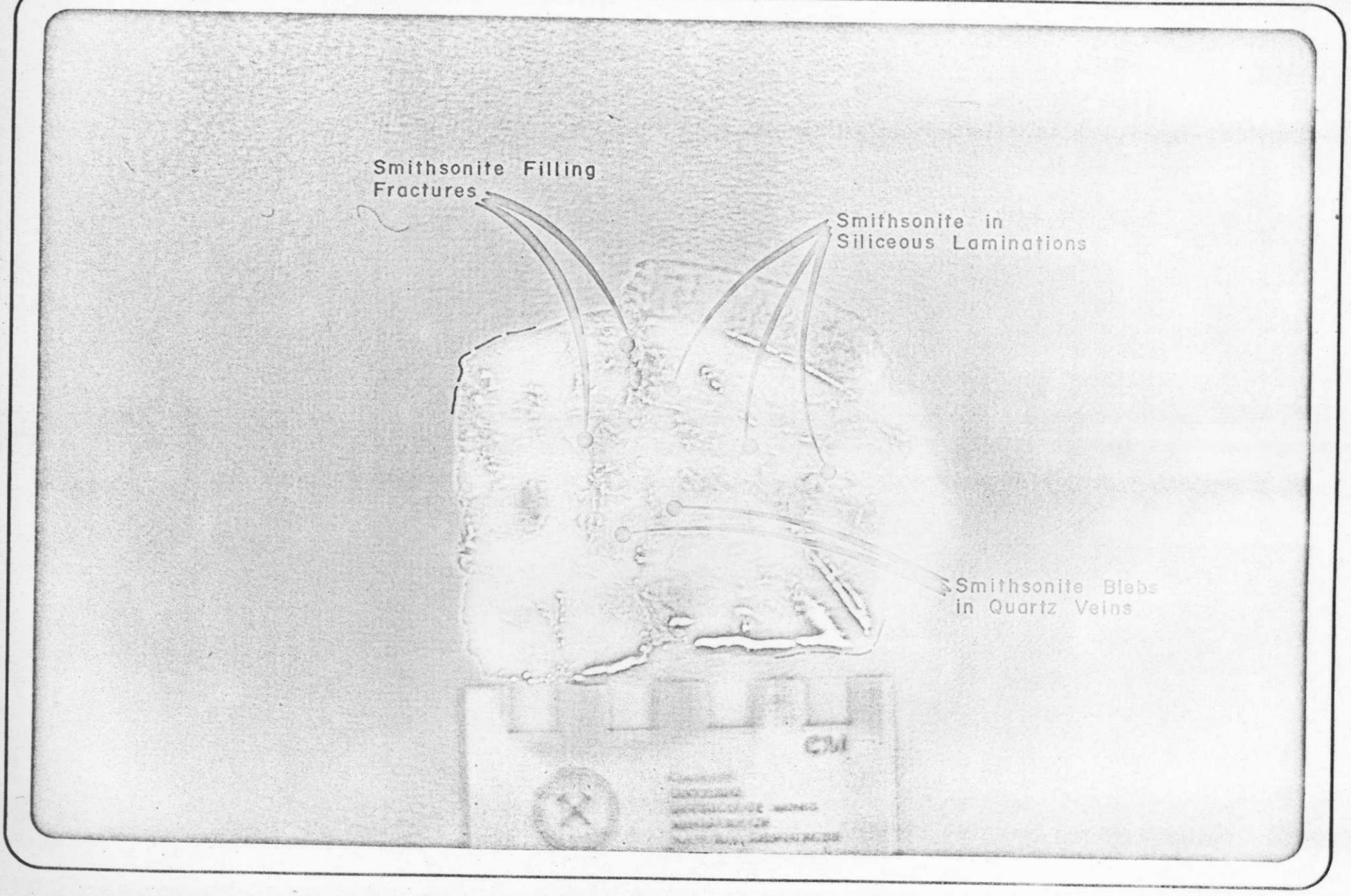


FIG. 17 ARGILLITE FROM THE ROSS SHOWING 4.1% ZINC MINERALIZATION

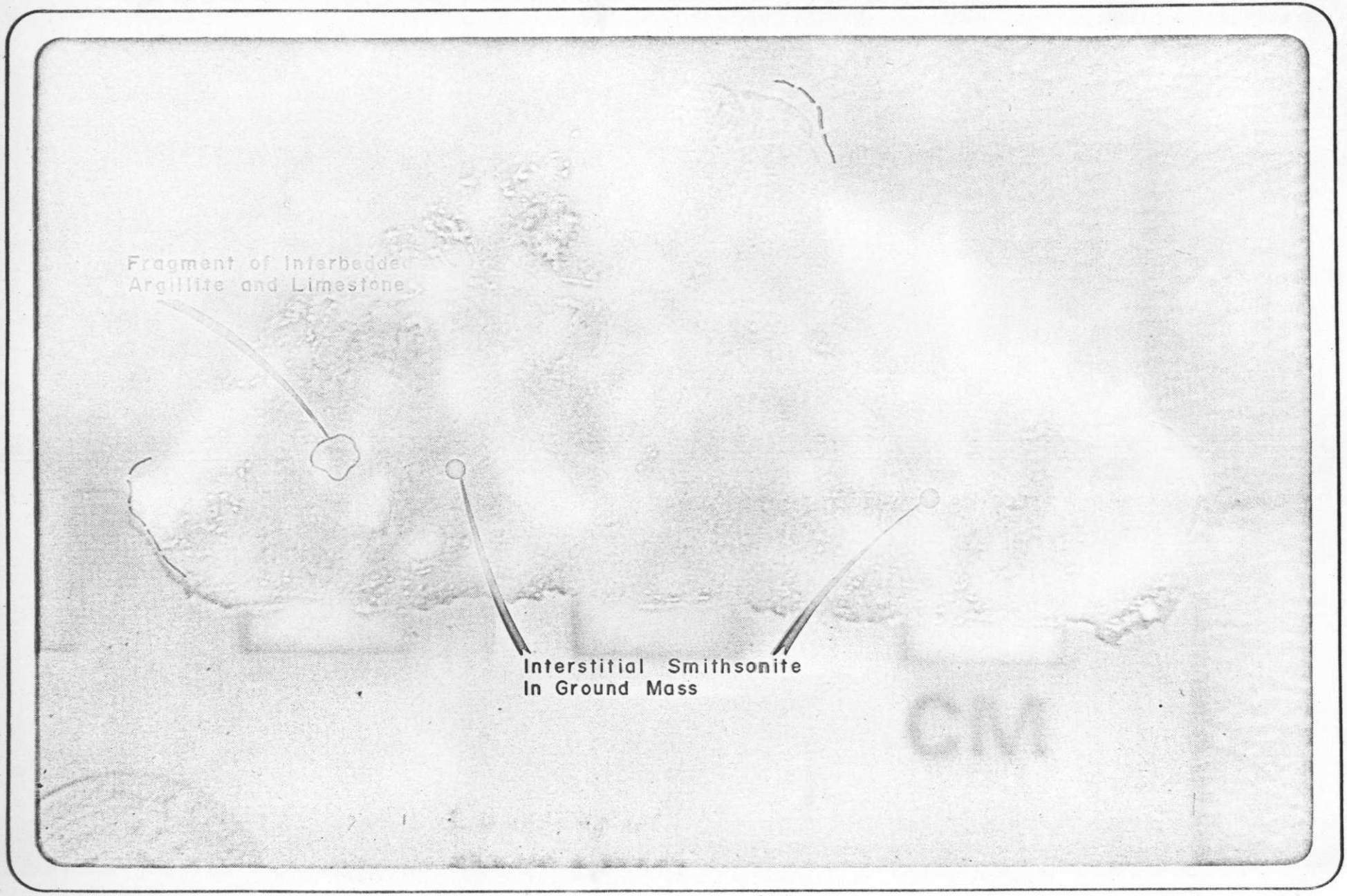


FIG. 18 AUTOBRECCIATED BARITIC LIMESTONE FROM THE ROSS SHOWING CONTAINING 2.8% ZINC

Two theories for the genesis of the Mount Ross mineralization have been postulated:

i) Syngenetic and epigenetic emplacement of zinc and argillites by subaqueous and interporous fluid transport related ultimately to exhalative activity;

ii) Epigenetic emplacement of zinc in fractures and breccia cavities following remobilization from zinciferous shales during regional metamorphism.

The close association of barite, a possible indicator of nearby exhalative activity, the presence of weakly mineralized, high temperature quartz vein stockworks in underlying orthoquartzites, and the stratabound nature of the mineralization are strong evidence for an exhalative source.

The weak zinc mineralization (generally less than 1% zinc) which predominates in unit OSslc and the lower part of unit SDsq is both syngenetic and epigenetic in nature. Syngenetic mineralization consists of microscopic sphalerite grains weakly disseminated parallel to bedding while epigenetic mineralization consists of smithsonite and hydrozincite coatings on bedding-plane partings and joints or cleavages which cross cut bedding. Rock types most commonly mineralized are carbonaceous shales and limestones, and orthoquartzites. Copper-silver mineralization, previously described for the Ross Showing, is also present in trace amounts in unit OSslc and the lower part of unit SDsq.

11.5 TRENCHING AND SAMPLING

Hand trenching, bulldozer trenching, and chip sampling were conducted in 1978 on the more important mineral occurrences discovered to date on the ANGIE claims. Figure 19 shows two of the three areas trenched - Angie Ridge on the east and Mount Ross on the west. The third area which received trenching, the East Angie Showing (8-32)[1], is located 5 kilometers southeast of Angie Ridge as illustrated on Plate 11-2.

Sampling was also carried out at many minor lead-zinc occurrences throughout the South Angie Grid Area and the reader is referred to Section 11.6 for results of that work.

11.5.1 Angie Ridge

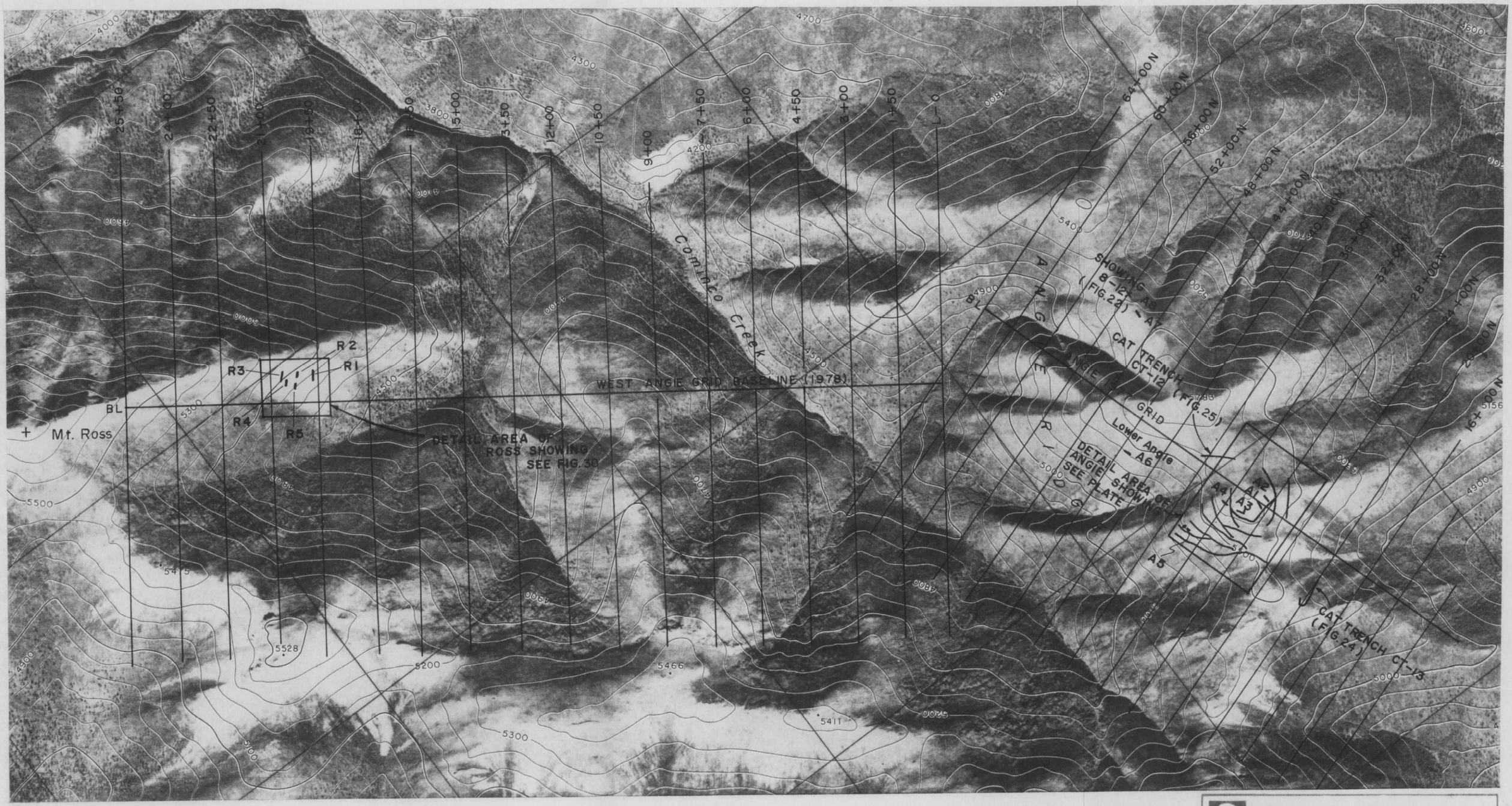
Hand trenching was carried out at the Lower Angie Showing (8-1) and the North Angie Showing (8-12), while both hand trenching and subsequent bulldozer trenching were carried out at the Angie Showing (Fig. 19) to expand bedrock exposure of zinc-silver mineralization created by previous hand trenches[2].

Table II summarizes the assay results from trench sampling and Figures 20 through 29 illustrate the location of samples taken as well as results of geological mapping carried out.

The reader should also refer to Plates 11-3 and 11-4 for a detailed planimetric view of the Angie cat trenches.

[1] Mineral Occurrence reference number.

[2] Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 5, p. 19.



LEGEND

A1-A8, R1-R5	HAND TRENCHES
CT-12	CAT TRENCH

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WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH LOCATION MAP

Scale 1 : 12,000	Date OCT. 1978	NTS 105 F/15
Revised	By F. FOSTER	Fig 19

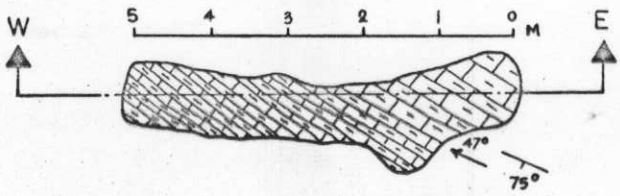
TABLE II

LIST OF ASSAYS FROM SAMPLING
CONDUCTED IN TRENCHES ON ANGIE RIDGE

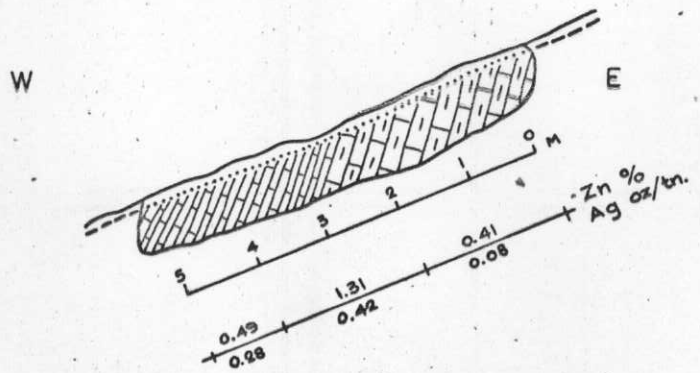
TRENCH	SAMPLE INTERVAL (meters)	SAMPLE WIDTH (meters)	SAMPLE NUMBER	Zn (%)	Ag (oz./ton)
A5	0 -2	2	832	0.41	0.08
	2 -4	2	833	1.31	0.42
	4 -5	1	834	0.49	0.28
A6	0 -2	2	835	0.40	0.13
	2 -4	2	836	0.52	0.10
	4 -6	2	837	0.04	0.09
A7	0 -2	2	826	0.30	0.07
	2 -4	2	827	0.25	0.08
	4 -6	2	828	0.15	0.05
	6 -8	2	829	0.23	0.06
A8	0 -2	2	830	0.07	0.07
	2.0-3.7	1.7	831	0.95	0.26
CT9	0 -1	1	606	5.60	1.00
	1 -2	1	607	570	1.58
	2 -2.7	0.7	608	8.20	1.32
CT1	CT1A				
	0 -0.5	0.5	8576	0.02	0.01
	0.5-1.0	0.5	8577	0.47	0.20
	1.0-1.5	0.5	8578	5.00	1.80
	1.5-2.0	0.5	8579	5.30	1.70
	2.0-2.5	0.5	8580	6.40	2.70
	2.5-3.0	0.5	8580	3.10	0.30
	3.0-3.5	0.5	8582	0.07	0.01
	3.5-4.0	0.5	8583	0.05	0.08
	4.0-4.5	0.5	8585	0.03	0.01
	5.0-5.5	0.5	8586	0.01	0.01
	5.5-5.6	0.5	8587	0.03	0.01
	CT1B				
	0 -0.5	0.5	8601	6.40	7.30
	0.5-1.2	0.7	8602	7.60	4.60
	3.0-3.5	0.5	8603	4.60	1.10
	3.5-4.0	0.5	8604	4.60	1.30
	4.0-4.5	0.5	8605	0.60	0.20
	4.5-5.0	0.5	8606	0.07	0.01

TABLE II (cont.)

TRENCH	SAMPLE INTERVAL (meters)	SAMPLE WIDTH (meters)	NUMBER	Zn (%)	Ag (oz./ton)
CT9	15-16	1.0	601	0.31	0.04
	16-17	1.0	602	0.39	0.20
	17-18	1.0	603	5.40	2.30
	18-19	1.0	604	10.40	2.80
	19-20	1.0	605	0.72	0.16



PLAN



SECTION

Sample	No.	Zn.%	Ag.oz.
0-2.0 M.	832	0.41	0.08
2.0-4.0 M.	833	1.31	0.42
4.0-5.0 M.	834	0.49	0.28

FOR LOCATION SEE FIG. 19

FOR LITHOLOGIC LEGEND SEE APPENDIX I

SAMPLED BY: G.SCOTT

WELCOME NORTH MINES LTD.

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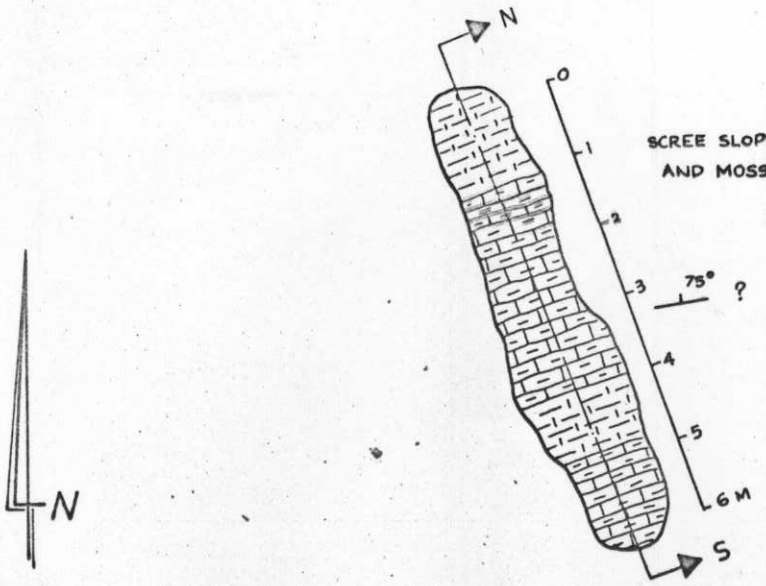
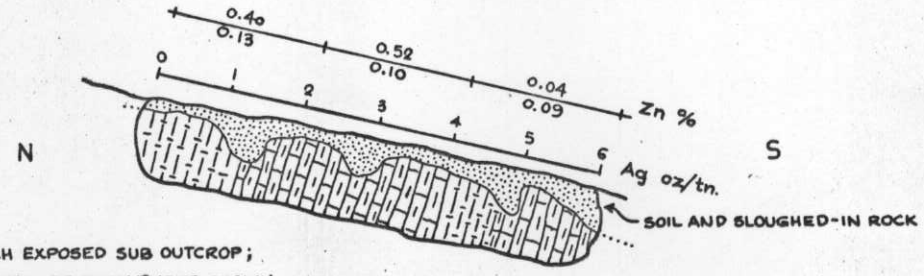
WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH A 5
ANGIE RIDGE (Showing 8-20)

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G.SCOTT	Fig. 20



TRENCH BADLY SLOUGHED-IN
EXPOSURE OF ROCK TYPES SHOWN
DIAGRAMMATICALLY

PLAN



TRENCH EXPOSED SUB OUTCROP;
EXPOSURE OF ROCK TYPES SHOWN
DIAGRAMMATICALLY

SECTION

Sample	No.	Zn.%	Ag.oz.
0-2.0 M.	835	0.40	0.13
2.0-4.0 M.	836	0.52	0.10
4.0-6.0 M.	837	0.04	0.09

FOR LOCATION SEE FIG. 19 AND PLATE II-2

FOR LITHOLOGIC LEGEND SEE APPENDIX I

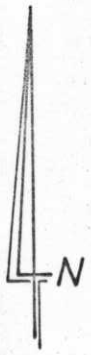
SAMPLED BY: G. SCOTT

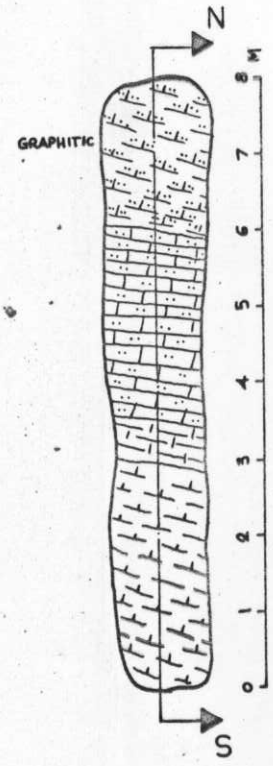
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

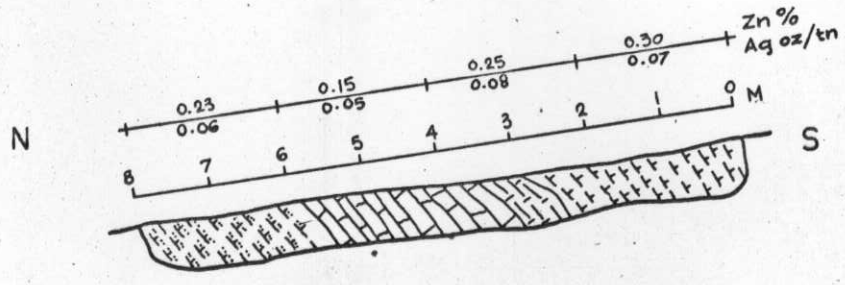
WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH A6
LOWER ANGIE (Showing 8-1)

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 21





PLAN



SECTION

Sample No.		Zn. %	Ag.oz.
0.-2.0 M.	826	0.30	0.07
2.0-4.0 M.	827	0.25	0.08
4.0-6.0 M.	828	0.15	0.05
6.0-8.0 M.	829	0.23	0.06

FOR LOCATION SEE FIG. 19

FOR LITHOLOGIC LEGEND SEE APPENDIX I

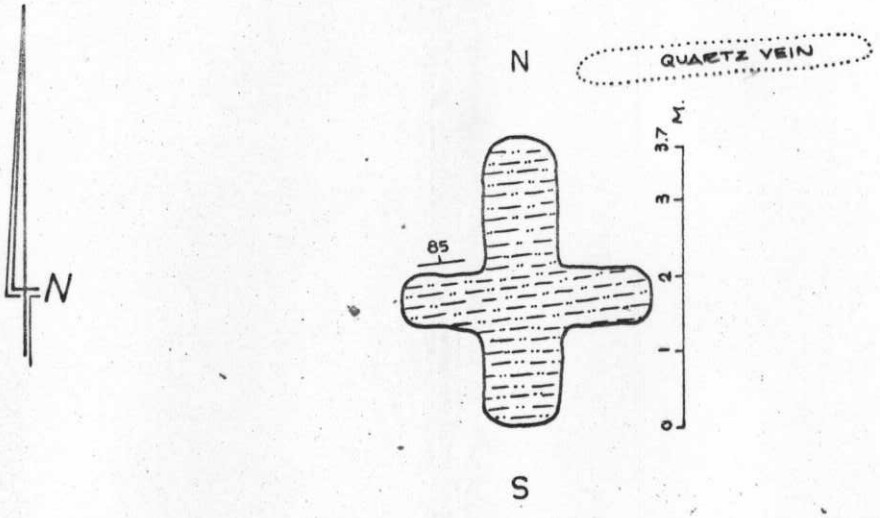
SAMPLED BY G. SCOTT

WELCOME NORTH MINES LTD.

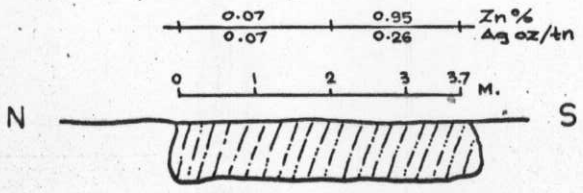
GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH A7
ANGIE RIDGE (Showing 8-12)

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 22



PLAN



SECTION

Sample	No.	Zn. %	Ag. oz.
0 - 2.0 M.	830	0.07	0.07
2.0 - 3.7 M.	831	0.95	0.26

FOR LOCATION SEE FIG. 19

FOR LITHOLOGIC LEGEND SEE APPENDIX - 1

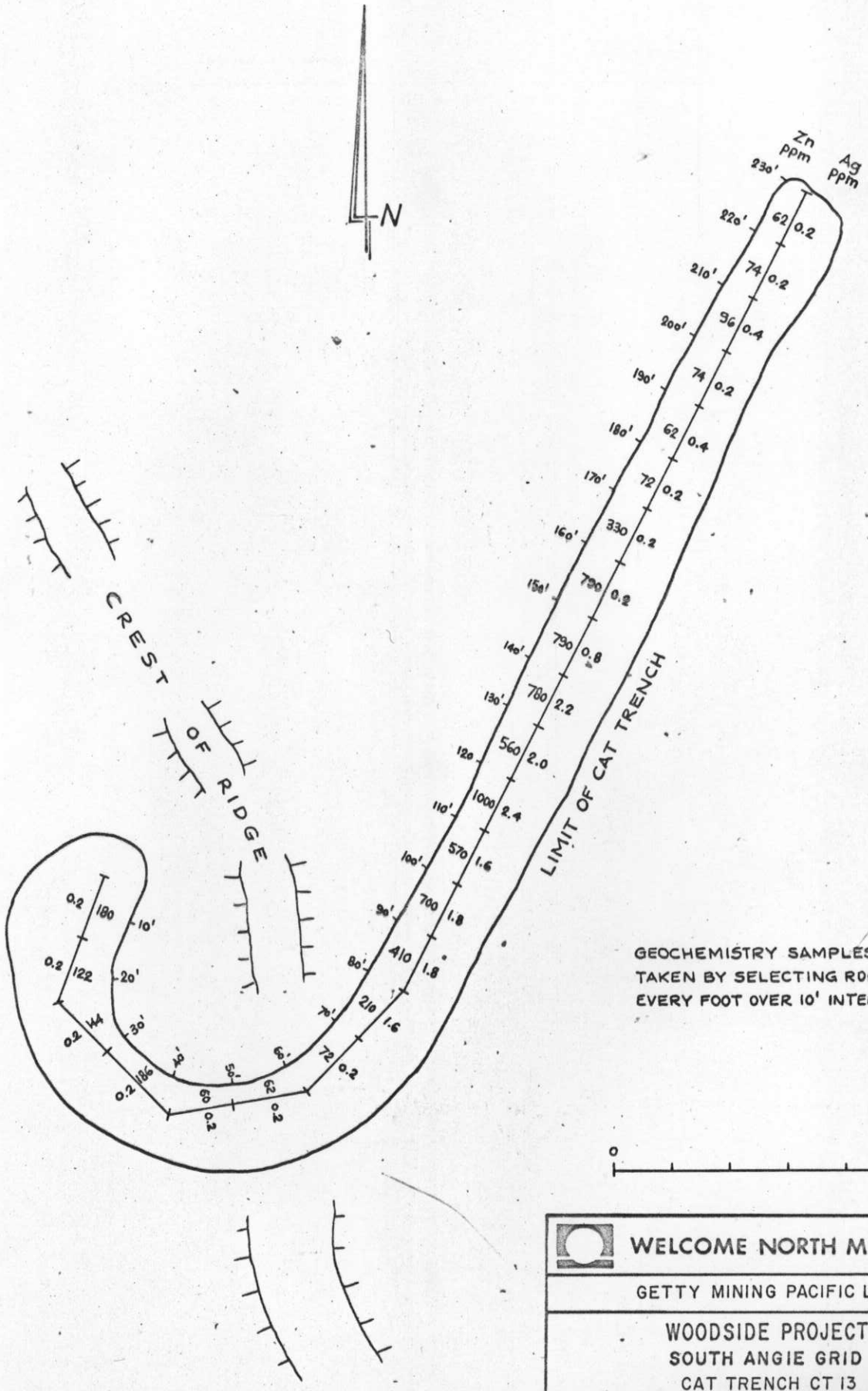
SAMPLED BY: G. SCOTT

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH A 8
ANGIE RIDGE (Showing 8-12)

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 23



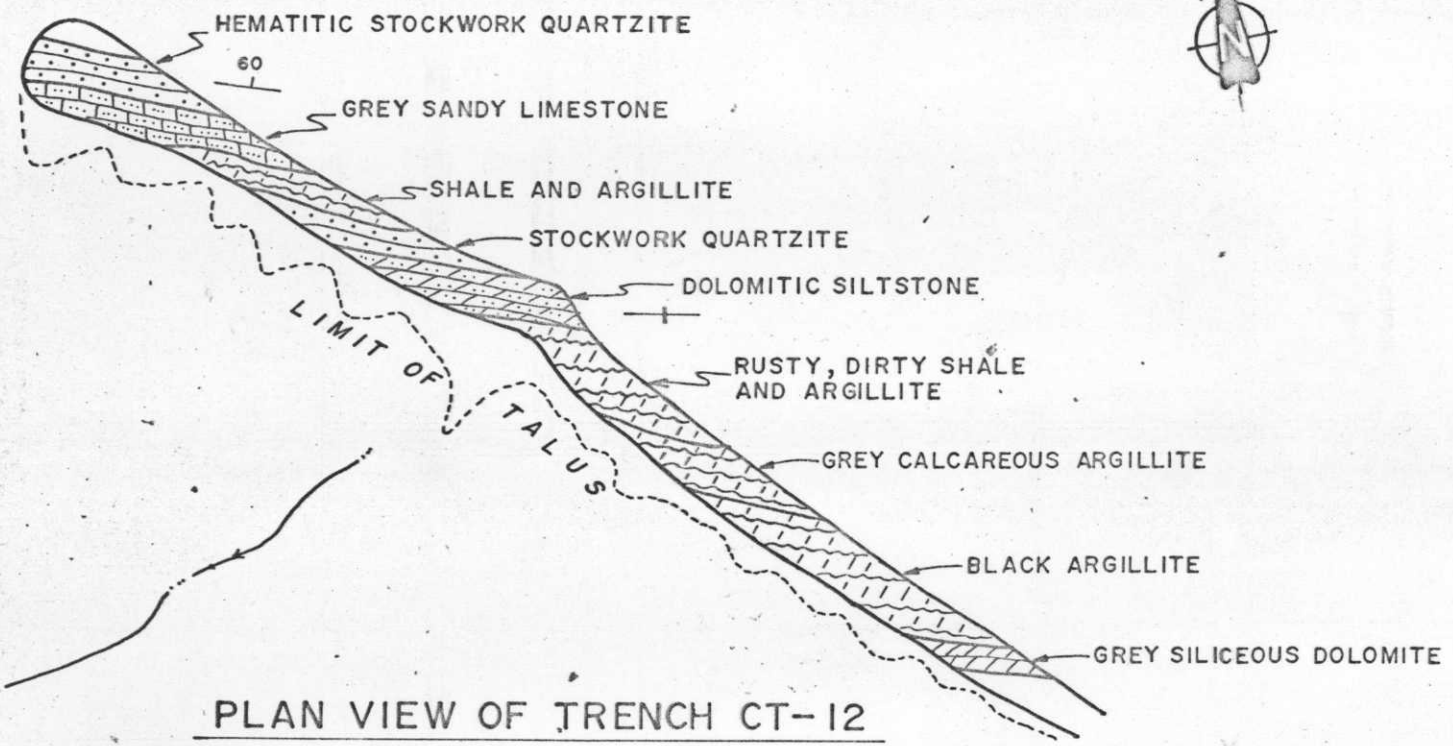
FOR LOCATION SEE FIG. 19

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
CAT TRENCH CT 13
Sample Locations and Results

Scale: AS SHOWN	Date: JULY 1978	N.T.S. 105 F 15
Revised:	By: R. TODDINGTON	Fig. 24



PLAN VIEW OF TRENCH CT-12

NOTE

FOR LOCATION SEE FIG. 19

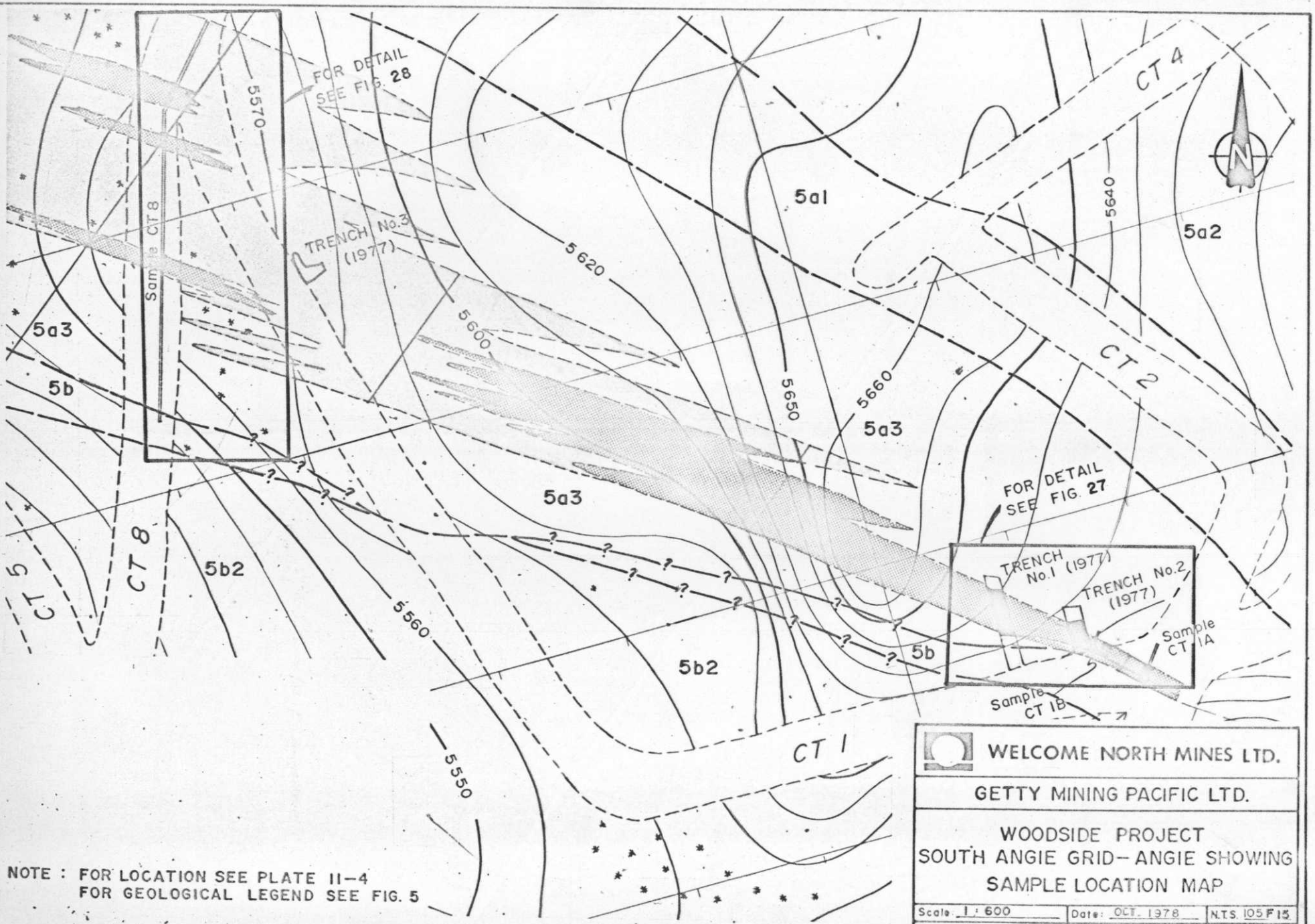
NO ASSAYS TAKEN.

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID-ANGIE SHOWING
TRENCH CT-12, GEOLOGY

Scale: 1 : 500	Date: OCT. 1978	N.T.S. 105 F 15
Revised:	By: F. FOSTER	Fig. 25



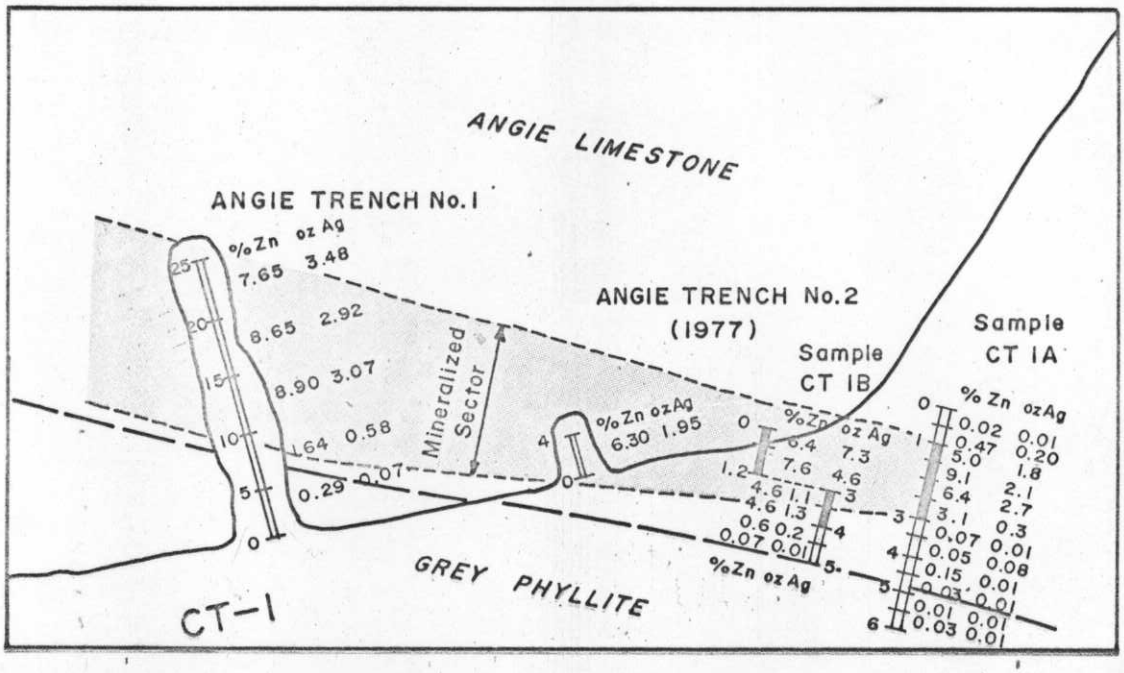
NOTE : FOR LOCATION SEE PLATE II-4
FOR GEOLOGICAL LEGEND SEE FIG. 5

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID - ANGIE SHOWING
SAMPLE LOCATION MAP

Scale 1 : 600	Date: OCT. 1978	N.T.S. 105 F 15
Revised:	By: F. FOSTER	Fig. 26



FOR LOCATION SEE PLATE II-4 AND FIG. 26

	SAMPLE No.	INTERVAL	% Zn	Oz/ton Ag
CT 1A	8576	0–0.5 meters	0.02	0.01
	8577	0.5–1.0 m	0.47	0.20
	8578	1.0–1.5 m	5.00	1.80
	8579	1.5–2.0 m	9.10	2.10
	8580	2.0–2.5 m	6.40	2.70
	8581	2.5–3.0 m	3.10	0.30
	8582	3.0–3.5 m	0.07	0.01
	8583	3.5–4.0 m	0.05	0.08
	8584	4.0–4.5 m	0.15	0.01
	8585	4.5–5.0 m	0.03	0.01
	8586	5.0–5.5 m	0.01	0.01
	8587	5.5–6.0 m	0.03	0.01
CT 1B	8601	0–0.5 meters	6.40	7.30
	8602	0.5–1.2 m	7.60	4.60
	8603	3.0–3.5 m	4.60	1.10
	8604	3.5–4.0 m	4.60	1.30
	8605	4.0–4.5 m	0.60	0.20
	8606	4.5–5.0 m	0.07	0.01

SAMPLED BY G. SCOTT.

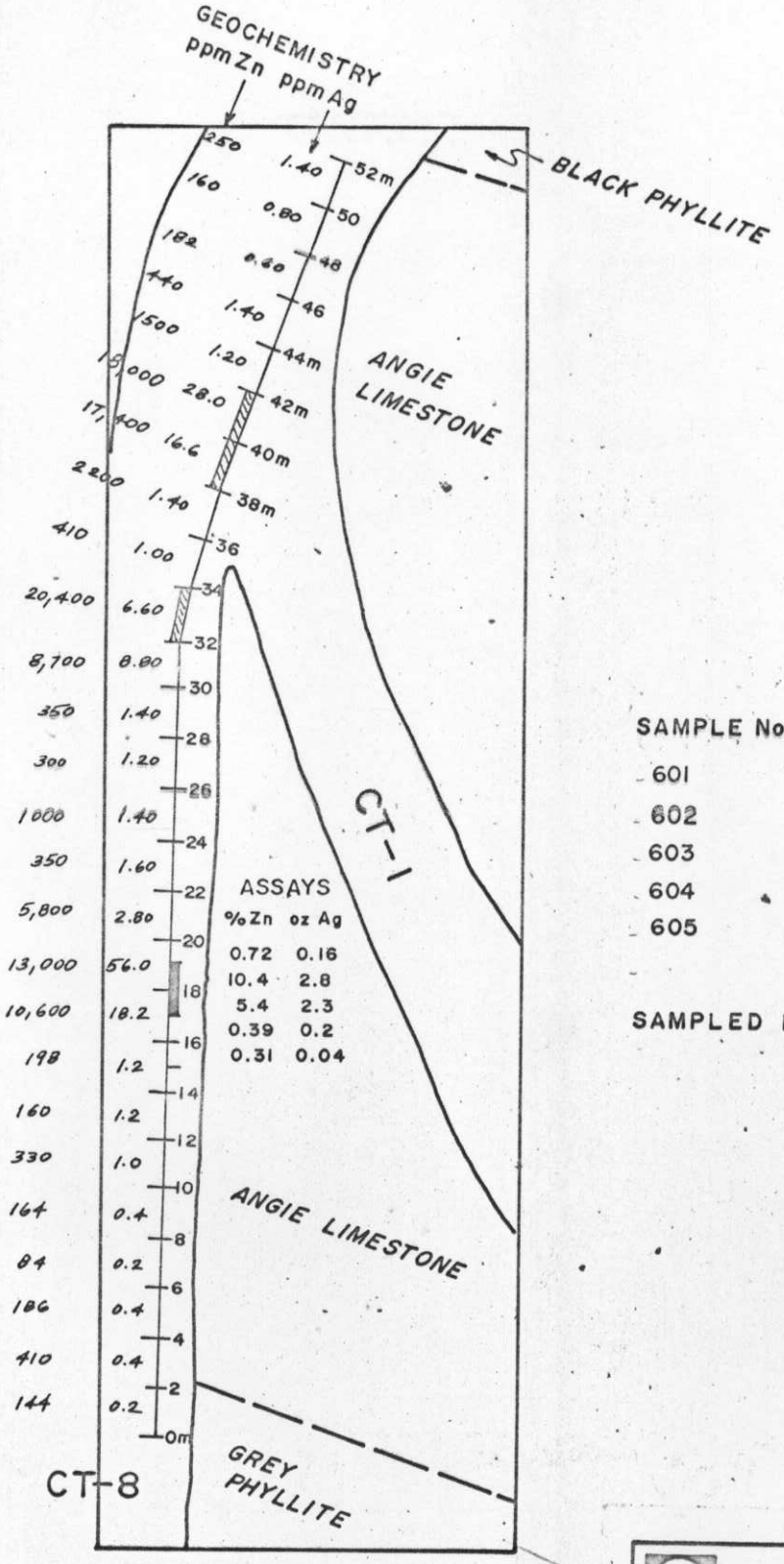
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT

SOUTH ANGIE GRID–ANGIE SHOWING
SAMPLE LOCATION MAP FOR CT–1

Scale: 1:200	Date: AUG. 1978	N.T.S. 105 F 15
Revised:	By: G.H.S.	Fig. 27



ASSAYS

SAMPLE No.	INTERVAL	% Zn	Oz/t Ag
601	15–16 m	0.31	0.04
602	16–17 m	0.39	0.20
603	17–18 m	5.40	2.30
604	18–19 m	10.40	2.80
605	19–20 m	0.72	0.16

SAMPLED BY G. SCOTT.

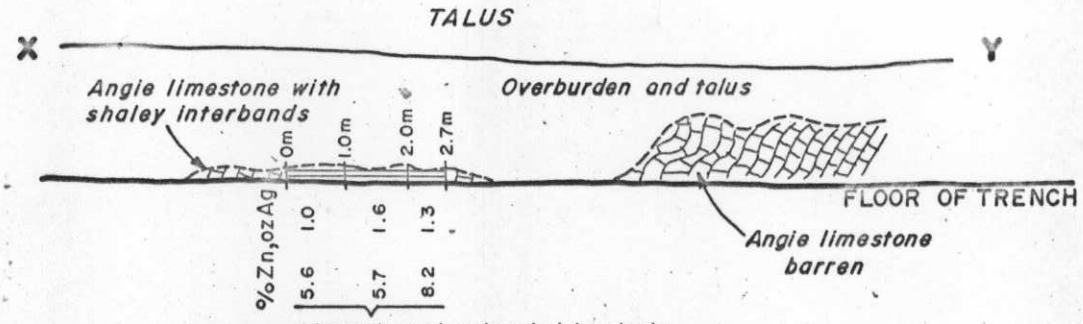
FOR LOCATION SEE PLATE II-4 AND FIG. 26

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID–ANGIE SHOWING
SAMPLE LOCATION MAP FOR CT-8

Scale: 1 : 300	Date: AUG. 1978	N.T.S. 105 F 15
Revised:	By: G. H. S.	Fig. 28



VIEW OF WALL OF TRENCH CT-9

LOOKING NE

ASSAYS

SAMPLE	% Zn	oz/ton Ag
606	5.60	1.00
607	5.70	1.58
608	8.20	1.32

Sampled by R. Holland

FOR LOCATION SEE PLATE II-4

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
SAMPLE LOCATION FOR CT-9

Scale: 1:125	Date: JULY 1978	N.T.S. 105 F15
Revised:	By: R. HOLLAND	Fig. 29

Mineralization exposed at the Angie Showing in the Angie cat trenches (Fig. 26 to 29) grades as high as 10.4% zinc and 7.3 oz./ton silver over one-half meter sections according to chip sample results from 1978; continuously mineralized sections of greater thickness are of lower grade:

Sample	Thickness (meters)	% Zn	Oz./ton Ag
Section CT 1A	2.0	5.9	1.73
Section CT 1B	3.2	5.8	3.58
Section CT 8	2.0	7.9	2.55
Section CT 9	2.7	6.5	1.30

Mineralization traced along strike tends to pinch and swell, transgress stratigraphy, and give way to the more widely dispersed low grade zones noted in geological mapping and detected by CT 8 samples (Fig. 28).

Mineralization has been found over a strike of 280 meters as established by trenching so far. The zone appears to be closed off to the southeast but still remains open to the northwest where the zone (CT 9, Plate II-3) appears to be thickening in that direction.

Assays from sampling of the 1978 hand trenches at the other showings on the Angie Ridge were disappointing relative to visual estimates made prior to sampling. The best result was obtained from Trench A5 (Fig. 20) which assayed 1.3% zinc and 0.4 oz./ton silver over two meters (roughly 1 meter of true stratigraphic thickness) in Dvc limestones, apparently equivalent to those at the main Angie Showing.

11.5.2 Mount Ross

The Mount Ross trenches are located over the Ross Showing (Fig. 14 and 19) in a steep talus fan on the south side of Mount Ross. Mineralization found in outcrops at the head of the talus fan was traced down slope into the talus fan where several small isolated outcrops of mineralization were also discovered.

A prospector's pit (Trench B, Fig. 19) was established over the initially discovered mineralization but was later abandoned when visually better grade mineralization was discovered lower on the hill.

Hand trenches were dug to better expose the newly discovered mineralization in outcrop. Both the trenching and the subsequent mapping and sampling carried out were hampered by continual shedding of rubble from the steep talus slope above.

Table III lists the results of assays from sampling carried out in the Mount Ross trenches and Figures 31 to 36 show their location along with geological interpretations.

Trenching and sampling have indicated that more than 15 meters true stratigraphic thickness of low grade (up to 1% zinc) mineralization exist at the Ross Showing, within which much narrower, higher grade sections running 4.76% zinc over 4 meters occur. Apart from copper and silver mineral occurring in accessory amounts, stratigraphically beneath the Ross Showing, zinc mineralization appears to be accompanied only by barite.

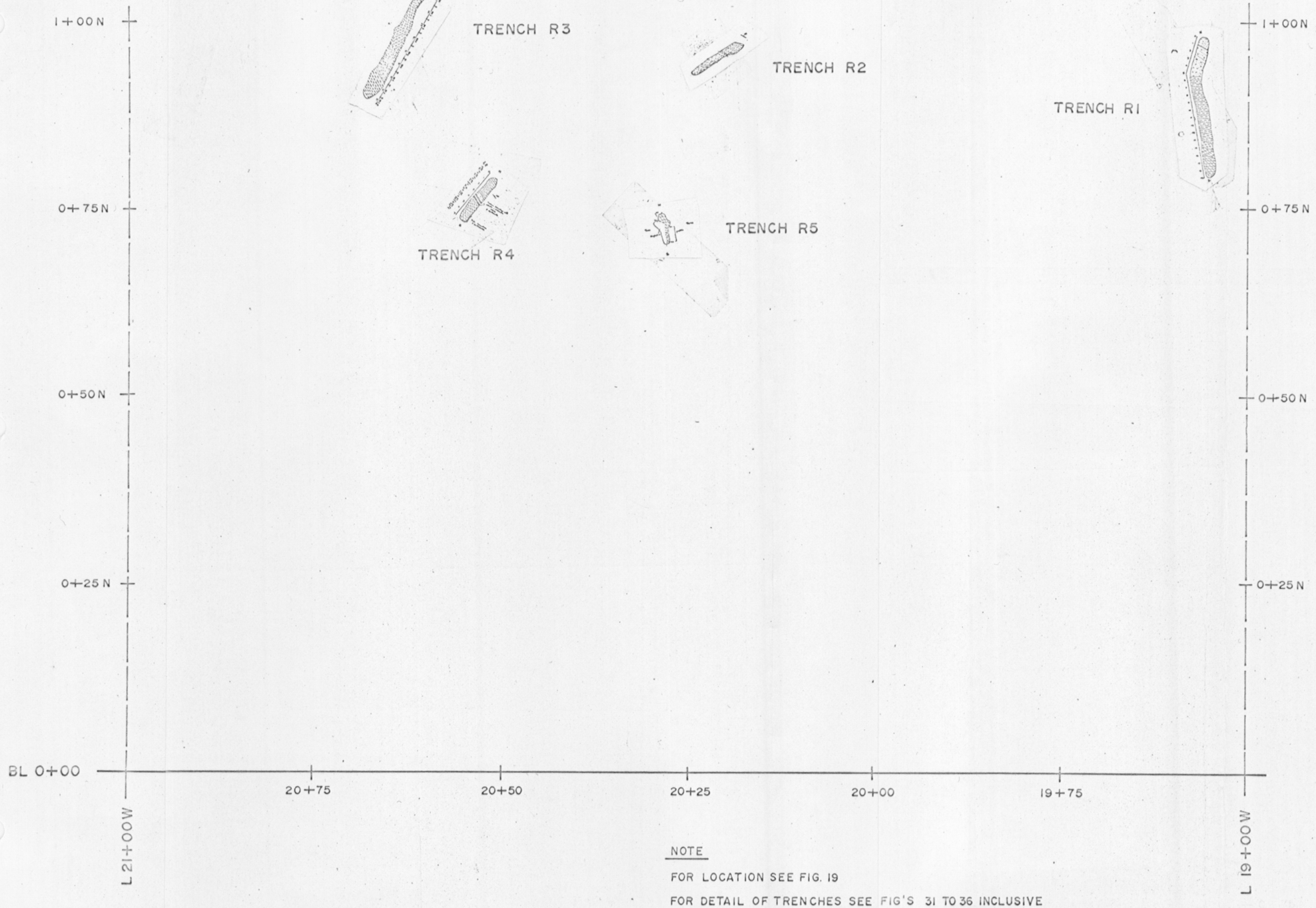
TABLE III

LIST OF ASSAYS FROM SAMPLING
CONDUCTED IN TRENCHES ON MOUNT ROSS

TRENCH	SAMPLE INTERVAL (meters)	SAMPLE WIDTH (meters)	SAMPLE NUMBER	Zn (%)	Ag (oz./ton)	Ba (ppm)
B	0 -2	2	807	0.13		
	2 -4	2	808	0.13		
	4 -6	2	809	0.37		
	6 -8	2	810	0.83	0.05	
	8 -9	1	811	0.20	0.05	
	9 -11	2	812	0.20	0.05	
	11 -13	2	813	0.17	0.05	
	13 -15	2	806	0.22	0.06	
R1	0 -2	2	825	0.04	0.05	
	2 -4	2	751	0.07	0.07	
	4 -6	2	752	0.12	0.09	
	6 -8	2	753	0.48	-	
	8 -10	2	754	0.30	-	
	10 -12	2	755	0.55	0.05	10,000
	12 -14	2	756	0.57	0.05	2,830
	14 -16	2	757	0.21	0.05	2,200
	16 -18	2	758	0.19	0.06	2,410
	18 -19	1	759	0.17	-	
R2	0 -0.5	0.5	814	0.11	-	
	0.5-1.0	0.5	815	0.17	-	
	1.0-1.5	0.5	816	0.06	-	1,930
	1.5-2.0	0.5	817	0.23	-	2,850
	2.0-2.5	0.5	818	1.49	-	11,300
	2.5-3.0	0.5	819	0,49	0.07	2,600
	3.0-3.5	0.5	820	0.11	0.09	
R3	0 -2	2	767	0.27	0.06	
	2 -4	2	768	0.39	-	
	4 -6	2	775	0.63	-	
	6 -8	2	769	0.75	-	
	8 -10	2	770	0.91	-	

TABLE III (cont.)

TRENCH	SAMPLE INTERVAL (meters)	SAMPLE WIDTH (meters)	SAMPLE NUMBER	Zn (%)	Ag (oz./ton)	Ba (ppm)
R3 (cont.)	10 -12	2	771	0.19	-	
	12 -14	2	772	0.21	-	
	14 -16	2	773	0.33	-	
	16 -17	1	774	0.31	-	
R4	0 -1	1	760	0.06	-	
	1 -2	1	761	0.14	-	
	2 -3	1	762	2.35	-	3,330
	3 -4	1	763	13.75	0.16	2,100
	4 -5	1	764	1.07	0.06	2,040
	5 -6	1	765	1.85	-	
	6 -7	1	766	0.56	-	
R5	0 -2	2	838	0.02	-	
	2 -4	2	839	0.24	-	



NOTE

FOR LOCATION SEE FIG. 19

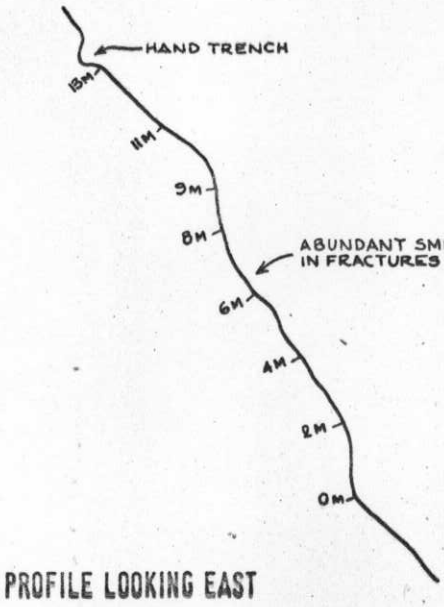
FOR DETAIL OF TRENCHES SEE FIG'S 31 TO 36 INCLUSIVE

WELCOME NORTH MINES LTD.

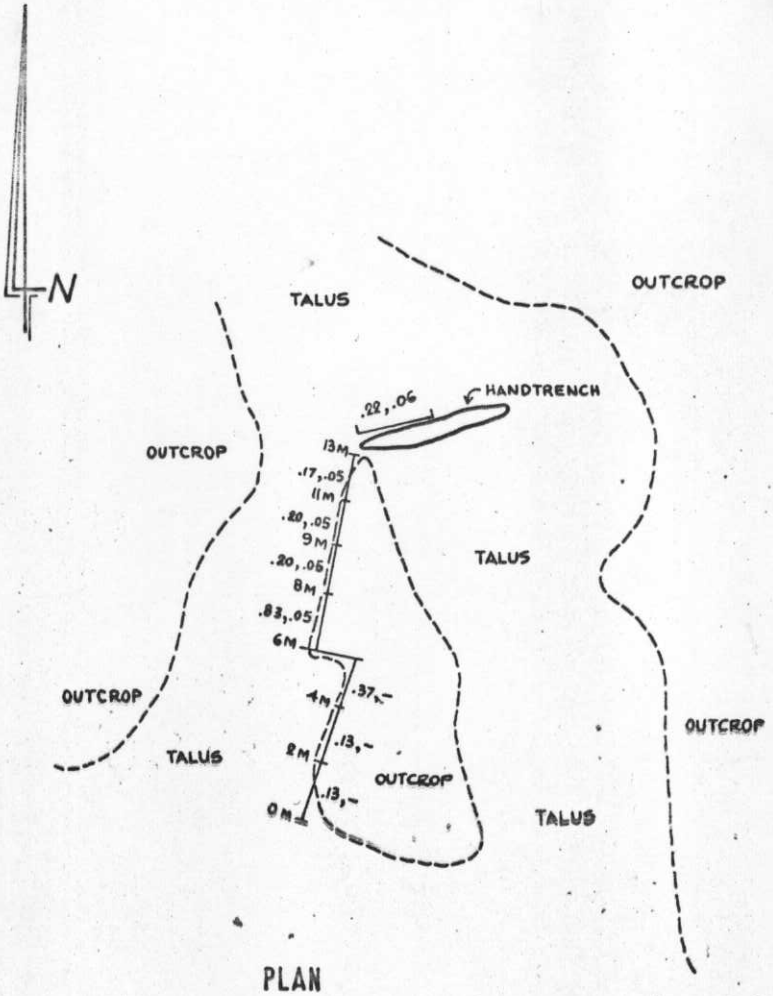
GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
Plan of Mt. Ross Trenches

Scale 1 : 500	Date OCT. 1978	NTS 105 F/15
Revised	By: F. FOSTER	Fig 30



PROFILE LOOKING EAST



PLAN

CHIP SAMPLING OF MT. ROSS SHOWING

Sample No.	Zn. %	Ag. oz.
807	0.13	—
809	0.37	—
810	0.83	0.05
811	0.20	0.05
812	0.20	0.05
813	0.17	0.05

FOR LOCATION SEE FIG. 14

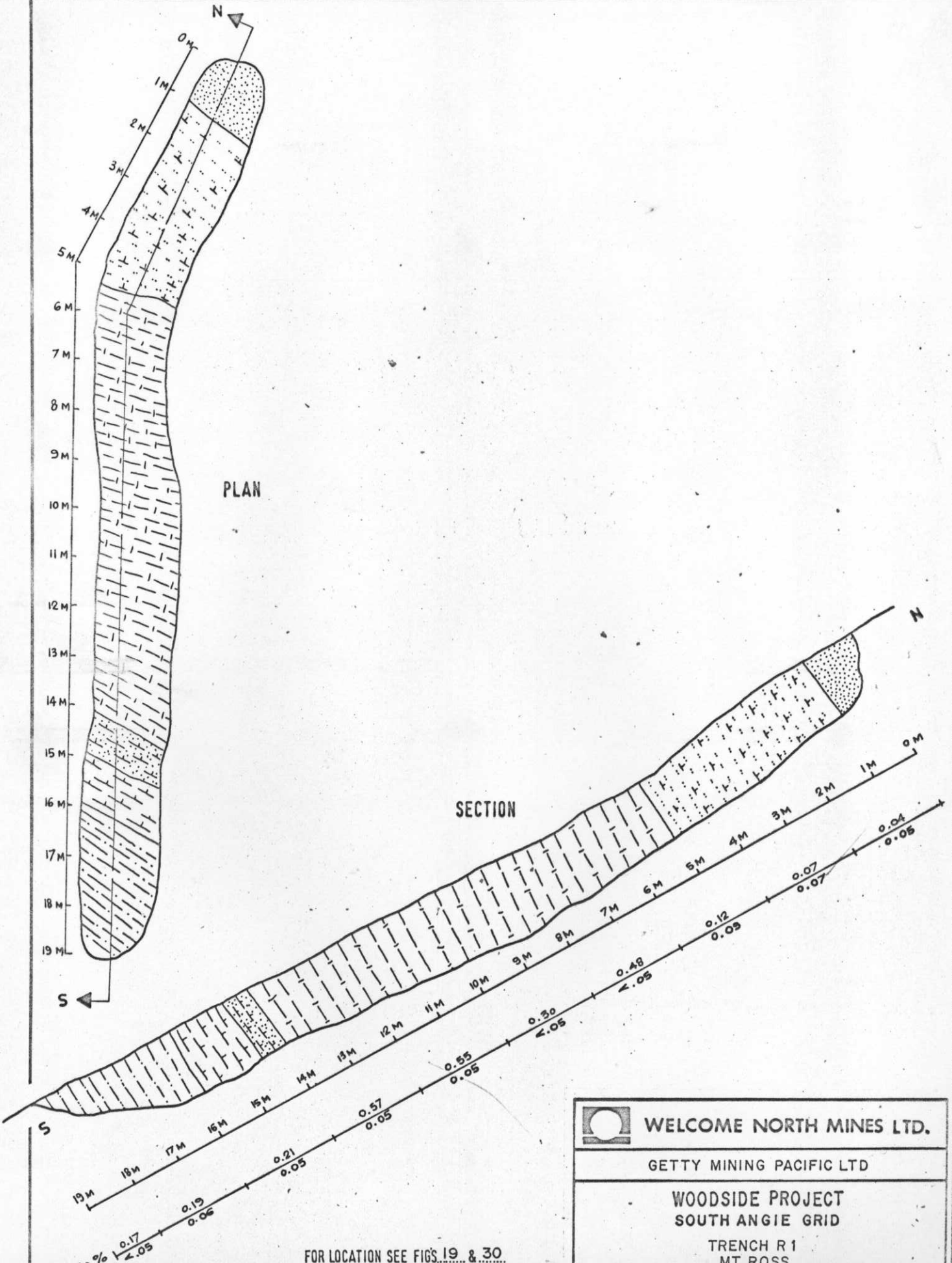
SAMPLED BY R. HOLLAND AND F. FOSTER.

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH B
MT. ROSS

Scale: 1:200	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: R. HOLLAND	Fig. 31



FOR LOCATION SEE FIGS. 19 & 30

FOR LITHOLOGIC LEGEND SEE APPENDIX 1

SAMPLED BY: G. SCOTT

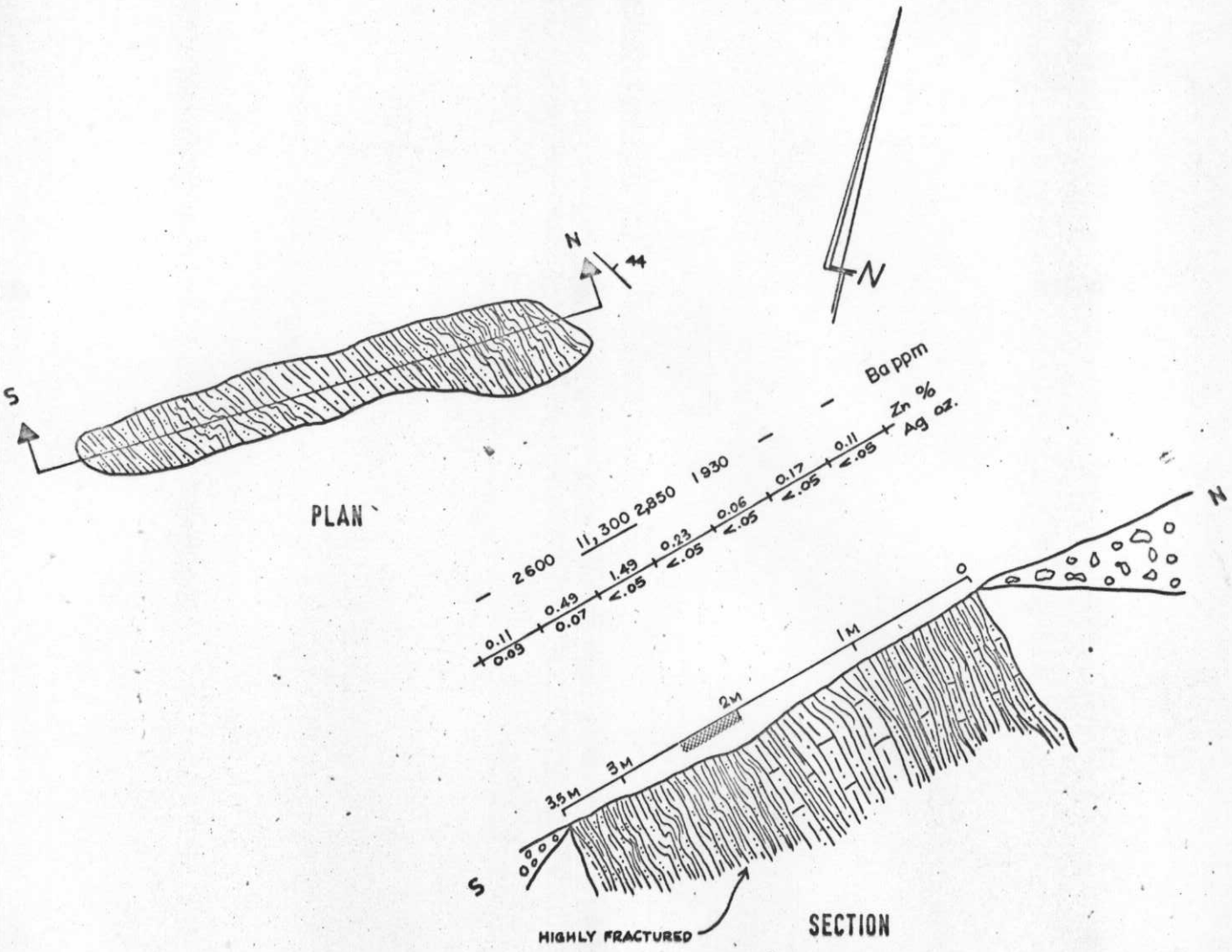
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD

WOODSIDE PROJECT
SOUTH ANGIE GRID

TRENCH R 1
MT. ROSS

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 32



Sample	No.	Zn.%	Ag.oz.	Ba ppm
0-0.5 M.	814	0.11	<0.05	
0.5-1.0 M.	815	0.17	<0.05	
1.0-1.5 M.	816	0.06	<0.05	1930
1.5-2.0 M.	817	0.23	<0.05	2850
2.0-2.5 M.	818	1.49	<0.05	11,300
2.5-3.0 M.	819	0.49	0.07	2600
3.0-3.5 M.	820	0.11	0.09	

FOR LOCATION SEE FIG'S 19 & 30

FOR LITHOLOGIC LEGEND SEE APPENDIX: I

SAMPLED BY : G. SCOTT & G. DELANE

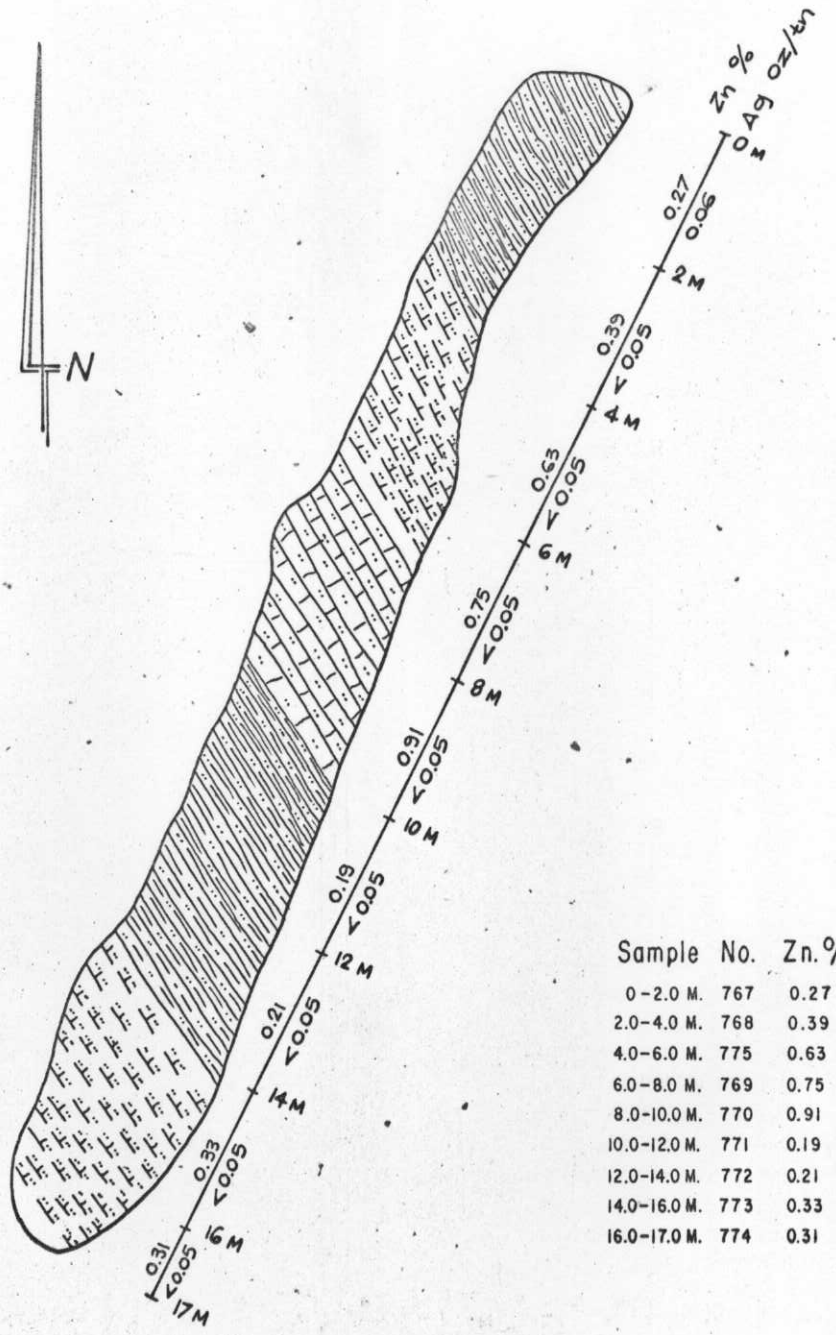
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID

TRENCH R2
MT. ROSS

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 33



Sample No.		Zn. %	Ag. oz.
0-2.0 M.	767	0.27	0.06
2.0-4.0 M.	768	0.39	< 0.05
4.0-6.0 M.	775	0.63	< 0.05
6.0-8.0 M.	769	0.75	< 0.05
8.0-10.0 M.	770	0.91	< 0.05
10.0-12.0 M.	771	0.19	< 0.05
12.0-14.0 M.	772	0.21	< 0.05
14.0-16.0 M.	773	0.33	< 0.05
16.0-17.0 M.	774	0.31	< 0.05

FOR LOCATION SEE FIG'S. 19 & 30

FOR LITHOLOGIC LEGEND SEE APPENDIX 1

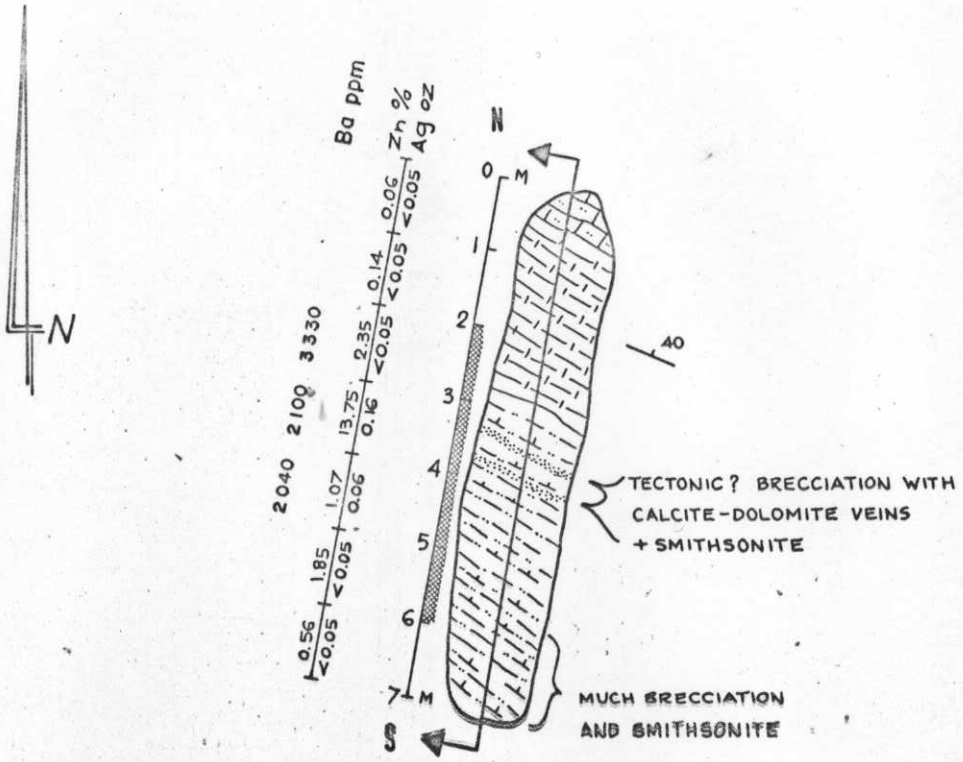
SAMPLED BY G.SCOTT

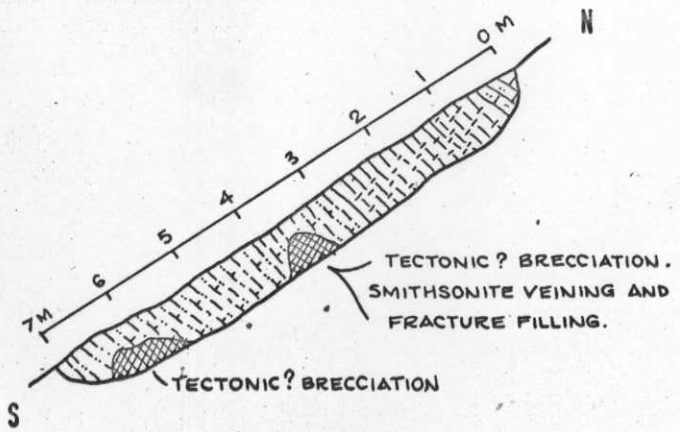
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH R3
MT. ROSS

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F15
Revised:	By: G.SCOTT	Fig. 34





Sample	No.	Zn.%	Ag.oz.	Ba ppm
0-1.0 M.	760	0.06	<0.05	
1.0-2.0 M.	761	0.14	<0.05	
2.0-3.0 M.	762	2.35	<0.05	3330
3.0-4.0 M.	763	13.75	0.16	2100
4.0-5.0 M.	764	1.07	0.06	2040
5.0-6.0 M.	765	1.85	<0.05	
6.0-7.0 M.	766	0.56	<0.05	

FOR LOCATION SEE FIG'S 19 & 30

FOR LITHOLOGIC LEGEND SEE APPENDIX 1

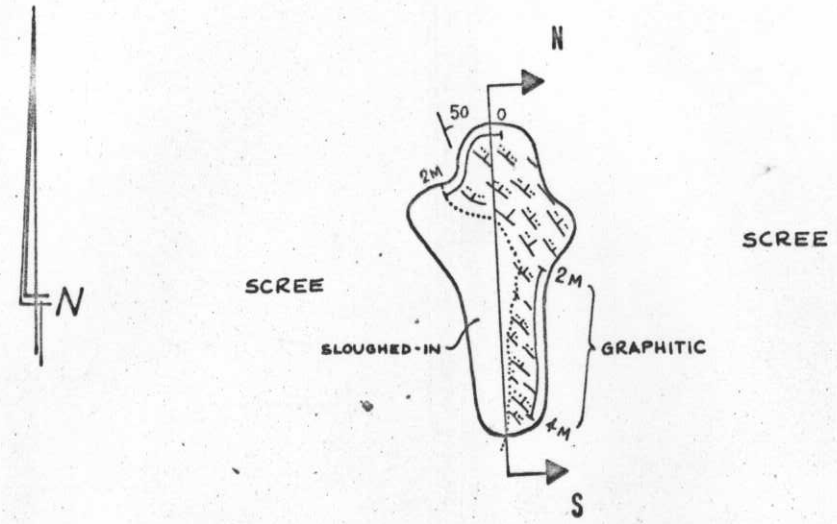
SAMPLED BY G. SCOTT

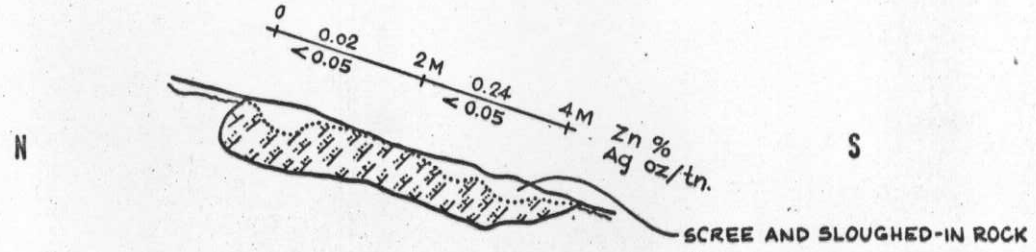
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH R4
MT. ROSS

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 35





Sample	No.	Zn.%	Ag.oz.
0-2.0 M.	838	0.02	<0.05
2.0-4.0 M.	839	0.24	<0.05

FOR LOCATION SEE FIG'S 19 & 30

FOR LITHOLOGIC LEGEND SEE APPENDIX I

SAMPLED BY: G.SCOTT

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
TRENCH R5
MT. ROSS

Scale: 1:100	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 36

There is no significant silver mineralization such as is found at the Angie Showing at the Ross Showing.

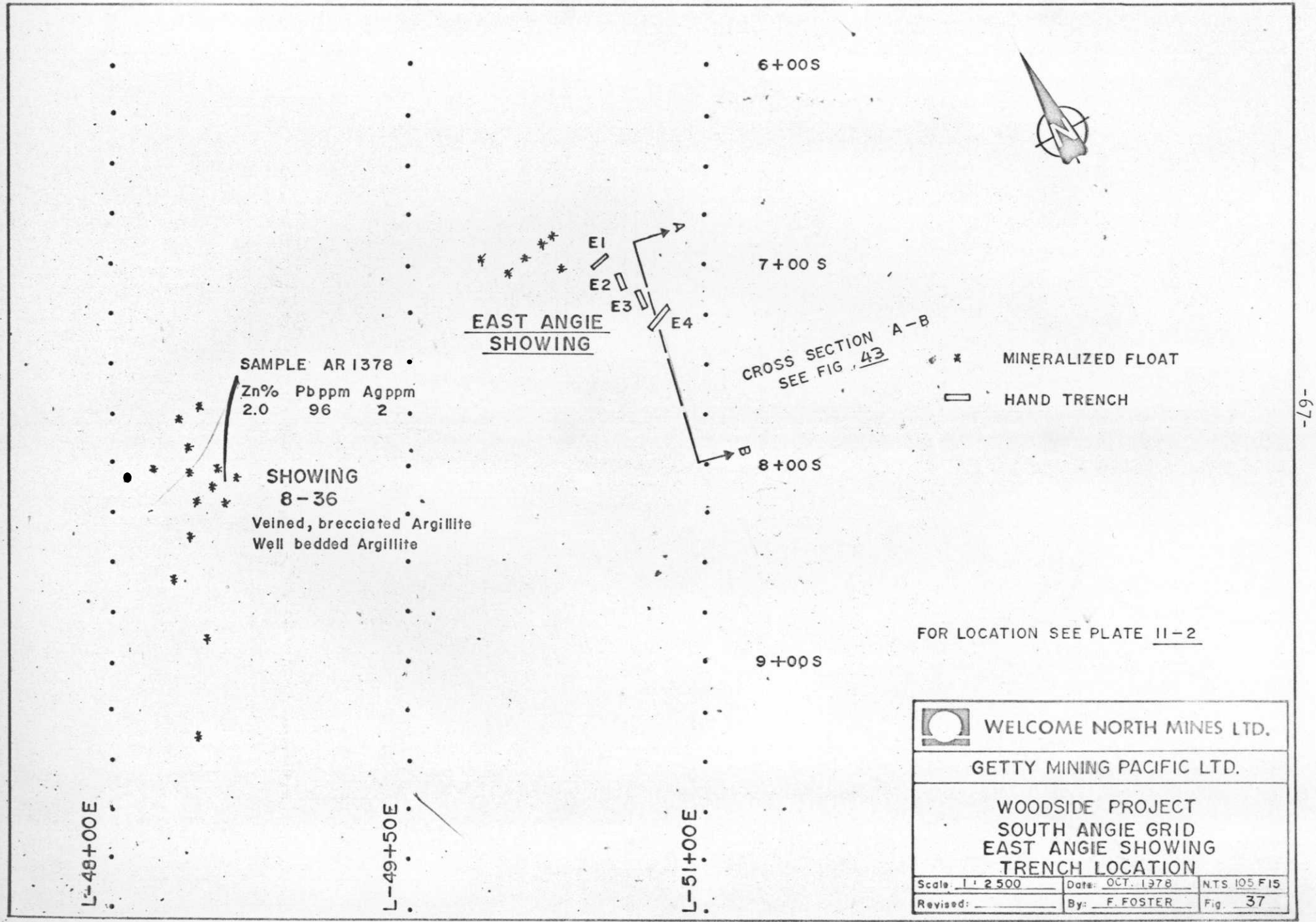
More mineralization is believed to occur beneath talus still farther down slope from the Ross trenches since the hanging wall (bedding overturned) of the mineralization as presently defined was not discovered. Trenching in this area, if successful in penetrating the thick talus cover, may well expose still more higher grade mineralization.

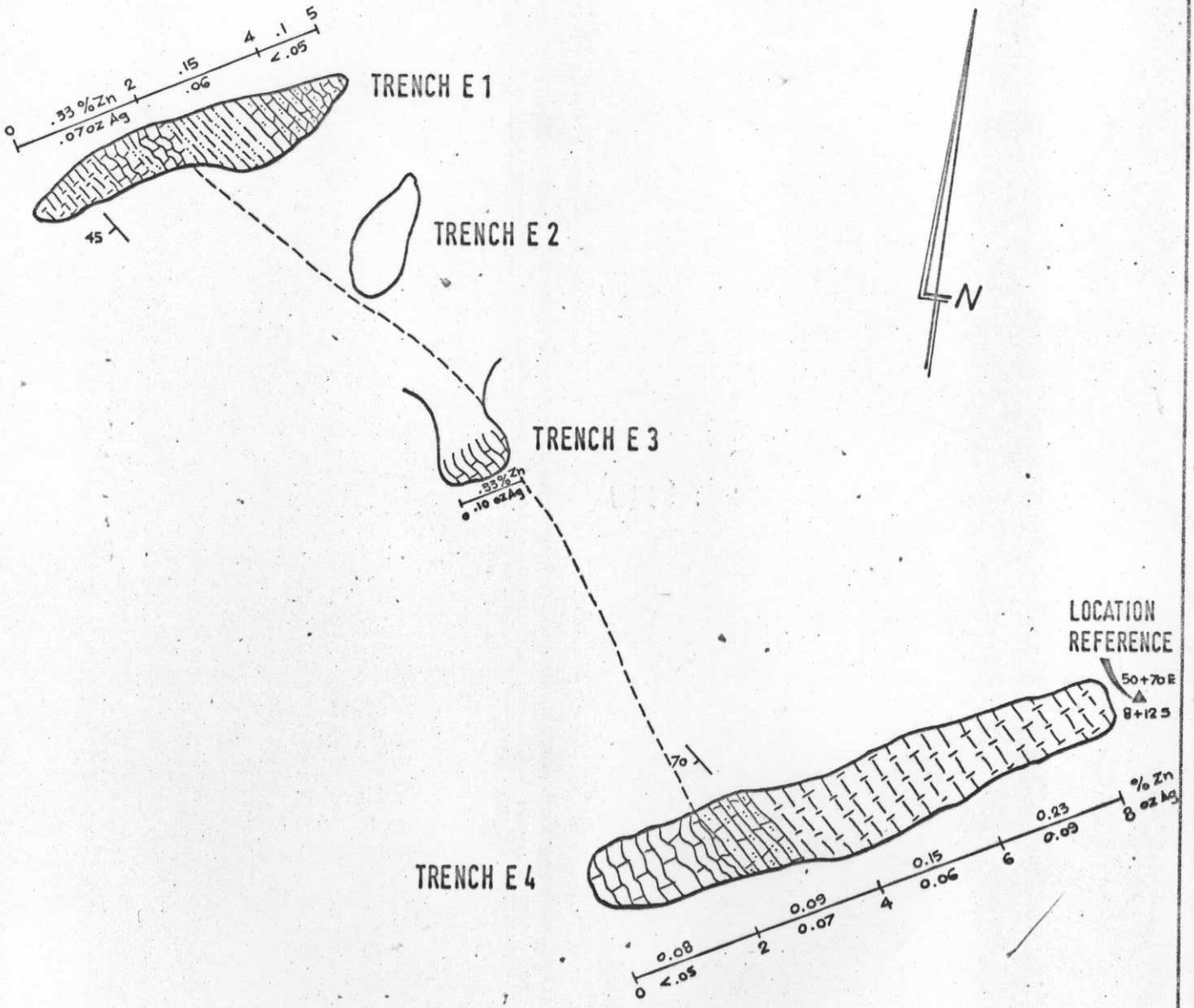
11.5.3 East Angie

Following the discovery of the East Angie Showing and other nearby occurrences in July, 1978 (Plate 11-2), hand trenching and sampling were carried out at the East Angie Showing (Fig. 37 and 38). Although individual specimens assayed up to 5.5% zinc and 0.10 oz./ton silver, chip sampling in the trenches yielded less than 1% zinc as follows:

Trench	Sample (meters)	Width (meters)	% Zn	Oz./ton Ag
E1	0-2	2	0.33	0.07
	2-4	2	0.15	0.06
	4-5	1	0.10	---
E3	0-1	1	0.33	0.10
E4	0-2	2	0.08	---
	2-4	2	0.09	0.07
	4-6	2	0.15	0.06
	6-8	2	0.23	0.09

Even though assay results were not encouraging, the geologic importance of the East Angie Showing is predicated by the fact that it is the exact stratigraphic equivalent of the Angie Showing, which lies 5 kilometers to the northwest.


6+00S
7+00 S
8+00S
9+00S
E1
E2
E3
E4
A
B
EAST ANGIE
SHOWING
CROSS SECTION A-B
SEE FIG. 43
MINERALIZED FLOAT
HAND TRENCH
SAMPLE AR 1378
Zn% Pb ppm Ag ppm
2.0 96 2
SHOWING
8-36
Veined, brecciated Argillite
Well bedded Argillite
L-48+00E
L-49+50E
L-51+00E
FOR LOCATION SEE PLATE II-2
WELCOME NORTH MINES LTD.
GETTY MINING PACIFIC LTD.
WOODSIDE PROJECT
SOUTH ANGIE GRID
EAST ANGIE SHOWING
TRENCH LOCATION
Scale 1 : 2500
Date: OCT. 1978
N.T.S. 105 F15
Revised:
By: F. FOSTER
Fig. 37



FOR LOCATION SEE FIG. 37

FOR LITHOLOGIC LEGEND SEE APPENDIX I

SAMPLED BY: G. SCOTT

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID

TRENCHES E1, E2, E3 and E4
EAST ANGIE (Showing 8-32)

Scale: 1:100	Date: JULY 1978	N.T.S. 105 F 15
Revised:	By: G. SCOTT	Fig. 38

11.6 PROSPECTING

On-going prospecting of the South Angie claim block during 1978 was directed by geological, geochemical, and prospecting data collected during 1977 and more recent data as it was obtained from other conjunctive work in 1978.

Early prospecting in the 1978 field season resulted in the discovery of a series of apparently stratigraphically related zinc occurrences between the Lapie River and the Angie Showing, the most important of which were discovered on Mount Ross. Continued prospecting turned up more showings southeast of the Angie Showing as well as extensions of the known Ross (1978) and Angie (1977) Showings.

All occurrences were initially evaluated upon discovery, and those which warranted further investigation were revisited and mapped. Results of these assessments and occurrences situated within the South Angie claim group are described on the following pages while evaluation of occurrences outside the claim group are described elsewhere in this report.

The following occurrences do not warrant a detailed description:

Showing No. 8- 7
8- 8
8-16
8-18
8-21
8-23
8-27
8-29
8-31

[1] Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1978, Chapter 12. Summary of Outside Exploration, November, 1978.

These showings generally consisted of minor sphalerite in quartz boudins or veins, and zinciferous shales which gave positive reaction to zinc test solutions. All contained less than 1% zinc and only accessory amounts of any other sulphides.

Listed below are descriptions of occurrences that received more detailed assessment, the locations of which are shown on Plates 11-2 and 11-7.

Showing No. 8-1 (Lower Angie)

Located at 41+50N; 5+50W on the Angie 1977 Grid, this showing consists of smithsonite, hydrozincite, and minor malachite-azurite mineralization in brecciated calcareous black limestone. The mineralization is interstitial to breccia fragments, occurring in stringers, or as disseminated blebs and fracture coatings. Mineralized talus was traced to a subcrop source approximately 10 meters wide beneath thick moss cover. Crude rubble sampling carried out at the source of the mineralized float yielded the following results.

Sample No.	Sample Interval (meters)	Sample Width (meters)	% Zn	Oz./ton Ag	% Cu
801	0-1.5	1.5	0.62	0.07	0.01
802	0-1.5	1.5	0.53	0.05	-
803	1.5-3.0	1.5	0.46	0.05	-
804	3.0-4.5	1.5	1.37	0.05	-
805	4.5-6.0	1.5	0.57	-	0.03

This showing was later trenched by hand and again chip sampled, the results of which are described in Section 11.5 (Trench A6, Angie Ridge).

About 75 meters to the east and slightly downslope from the above-described occurrence more mineralization was found and presumed to be

an extension of the same mineralization. This occurrence is exposed in the core of a steeply southerly-plunging open anticline. Mineralization consists of smithsonite on fractures in dense, bedded, silty grey limestone. Chip sampling of this occurrence gave the following values. No further work is recommended.

Sample No.	Sample Interval (meters)	Sample Width (meters)	% Zn	Oz./ton Ag
785	0-2.0	2	0.35	0.05
787	2.0-4.0	2	0.26	
791	4.0-6.0	2	0.18	0.05

Occurrence 8-4 (Ross Showing)

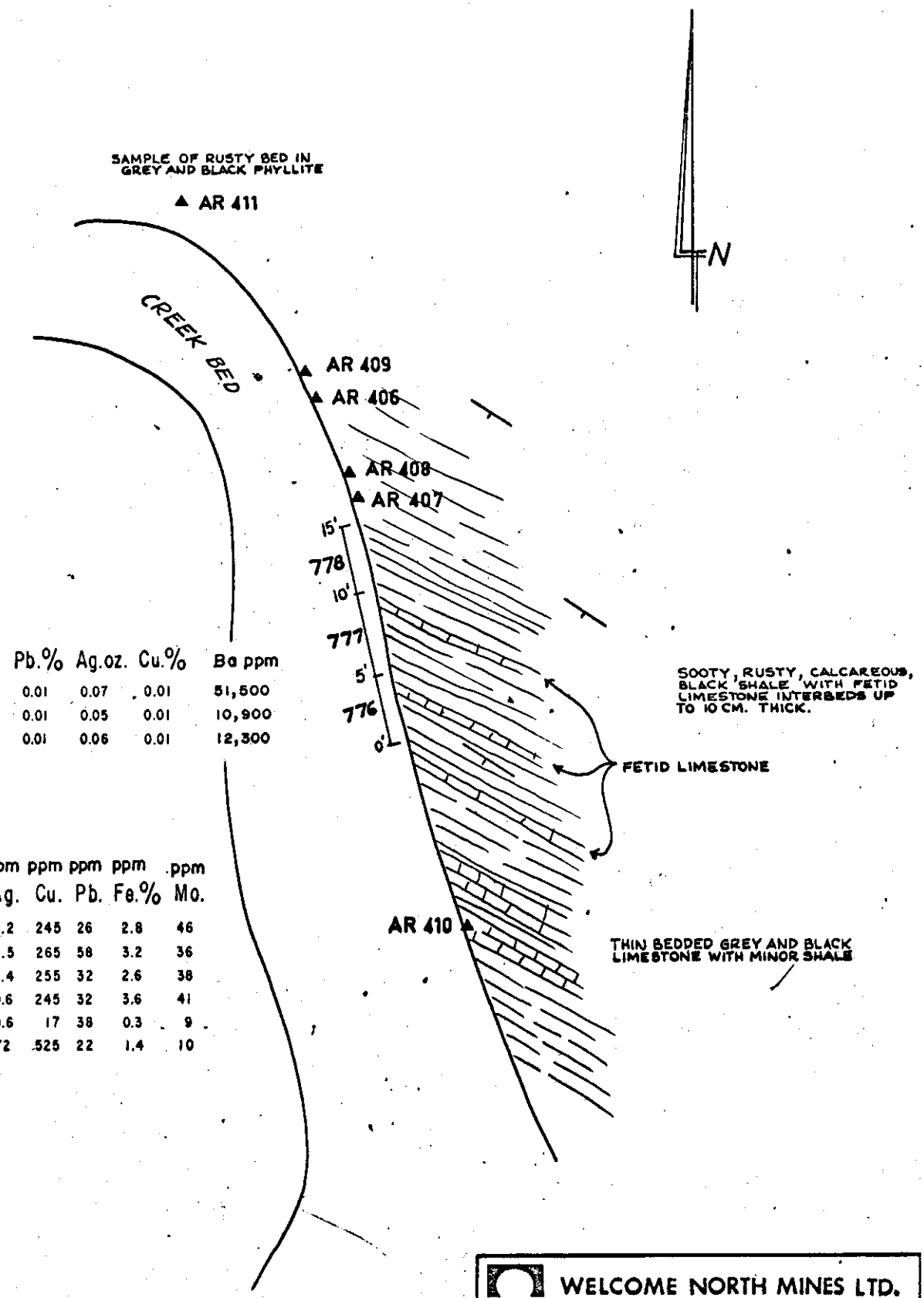
This occurrence, situated on a steep scree slope on the south side of Mount Ross, was worked on extensively during the 1978 field season and the reader is referred to Section 11.5 of this report for results of trenching and mapping.

Occurrence 8-5 (PW Showing)

Situated in a cliff face along the north side of Laf Creek (Plate 11-2) this occurrence consists of shales with baritic, fetid limestone interbeds hosting native silver and smithsonite.

Native silver is disseminated in the limestone in only insignificant amounts (see Fig. 39 for results of assays). It also occurs in the black shale, as evidenced by a rusty bed 1 centimeter thick which assayed 72 ppm silver.

Smithsonite also occurs within the shale but assays of chip samples indicate that these shales have only high background zinc values. Most of the zinc is detected only by positive reaction to zinc test solution.



Sample	Zn.%	Pb.%	Ag.oz.	Cu.%	Ba ppm
776	0.08	0.01	0.07	0.01	51,500
777	0.06	0.01	0.05	0.01	10,900
778	0.02	0.01	0.06	0.01	12,300

Sample	ppm Zn.	ppm Ag.	ppm Cu.	ppm Pb.	ppm Fe.%	ppm Mo.
AR 406	1800	1.2	245	26	2.8	46
AR 407	2000	5.5	265	58	3.2	36
AR 408	1800	2.4	255	32	2.6	38
AR 409	1900	0.6	245	32	3.6	41
AR 410	70	0.6	17	38	0.3	9
AR 411	690	72	525	22	1.4	10

FOR LOCATION SEE PLATE II-2

FOR LITHOLOGIC LEGEND SEE APPENDIX 1

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
PW Showing (8-5)
Sample Locations and Results

Scale: 1:500	Date: JUNE 1978	N.T.S. 105 F15
Revised:	By: F. FOSTER	Fig. 39

Although no further work is recommended on this occurrence, the high barium assays (Fig. 39) of up to 5% over 5 feet are significant since high barium values are noted at the nearby Ross Showing where similar lithologies occur.

Occurrence 8-6 (Laf Showing)

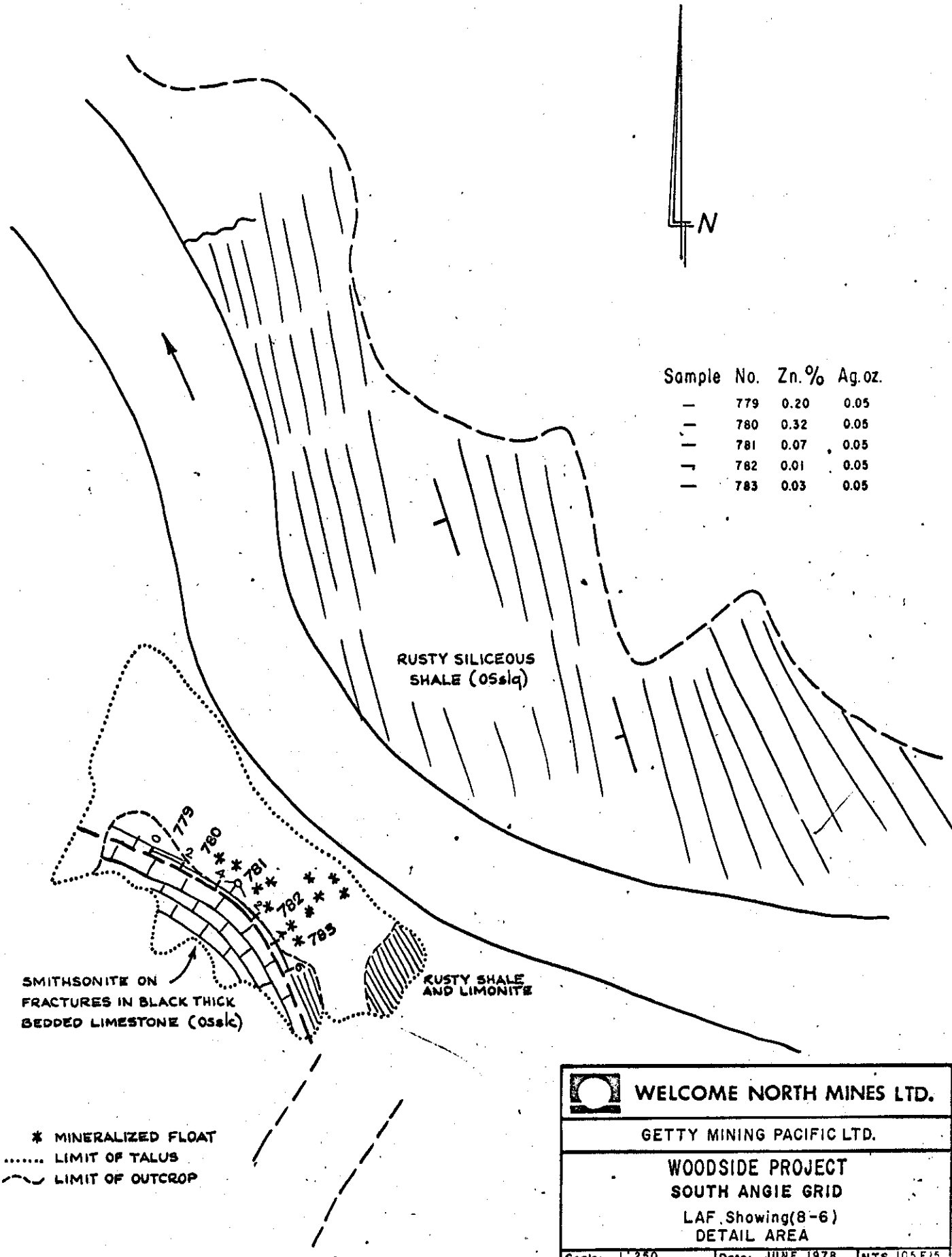
Smithsonite mineralization was discovered in fractures in black sooty limestone outcropping in a steep canyon in Laf Creek (Plate 11-2) just west of the PW Showing. The mineralization, which was exposed in a vertical bedding plane surface, is located close to a contact between the black, veined, sooty limestone and rusty siliceous shale (Fig. 40). Assays at the showing returned only 0.3% zinc over 2 meters. Minor zinc was detected utilizing zinc test solutions elsewhere on the creek bed in both the limestone and the siliceous shale (Fig. 41), however this mineralization was below the limits of assay detection.

A flagline grid was installed in the area on which soil sampling geochemical surveys and preliminary magnetic surveys were carried out; results of these surveys are described in Sections 11.7 and 11.8.

Although the showing appears quite insignificant, a large magnetic anomaly (described in Section 11.8) which exists immediately to the south in an area of thick moss cover and no outcrop, points to the necessity of further investigation.

Occurrence 8-9

Barite occurs as thin stringers approximately 1 to 4 centimeters in width in a 5-meter thick section of shaley limestone at this occurrence located on the Lapie River. Positive reaction to zinc test solution was noted but no visible zinc mineralization was found. No further work is recommended for this occurrence.



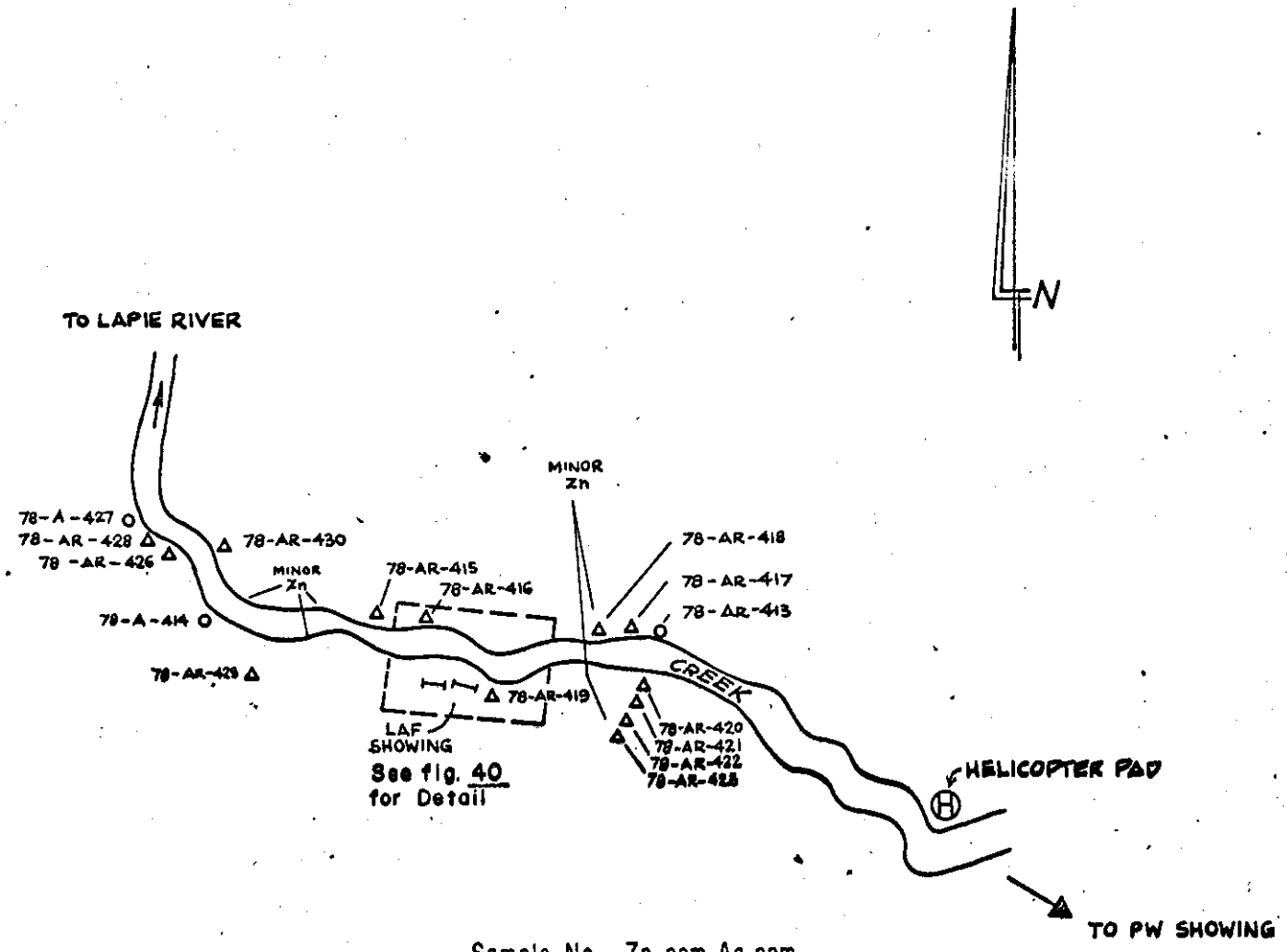
FOR LOCATION SEE FIG. 41 AND PLATE II-2

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF. Showing(8-6)
DETAIL AREA

Scale: 1:250	Date: JUNE 1978	N.T.S. 105 F15
Revised:	By: F. FOSTER	Fig. 40



Sample No.	Zn. ppm	Ag. ppm
78-A-413	330	0.3
78-A-414	340	0.2
78-AR-415	250	2.4
78-AR-416	122	1.4
78-AR-417	210	2.2
78-AR-418	770	1.1
78-AR-419	560	1.2
78-AR-420	420	1.0
78-AR-421	310	1.6
78-AR-422	640	0.6
78-AR-423	2800	2.4
78-AR-426	270	0.4
78-A-427	82	0.1
78-AR-428	770	1.2
78-AR-429	900	0.8
78-AR-430	560	1.2

△ ROCK CHIP SAMPLE

○ SILT SAMPLE

FOR LOCATION SEE PLATE II-2

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF (Showing 8-6)
Sample Locations and Results

Scale: 1:5000	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By: A.L.	Fig. 41

Occurrence 8-10

Situated near the Ross Showing, this occurrence, which consists of smithsonite fracture filling in sooty grey limestone, is considered to be part of the Mount Ross mineralization described previously in this section.

Occurrence 8-11

This occurrence also consists of smithsonite fracture filling in a 2-meter thickness of black and grey sooty limestone in OSslc on the north side of Mount Ross. No sampling was carried out at this minor occurrence.

Occurrence 8-12 (North Angie Showing)

Abundant smithsonite talus was traced to outcrops of silty black limestone on the crest of Angie Ridge where later hand trenching (Section 11.5, Trenches A7 and A8) revealed smithsonite coating fractures in silty black limestone and sparsely bedded smithsonite within black siltstone of Dvc similar to that found at the Angie showing. Results of work carried out to date indicate that no further work should be done on this showing.

Occurrence 8-13

At this occurrence, situated north of Mount Ross (Plate 11-2), minor smithsonite was observed coating fractures in black OSslc limestone. The occurrence is typical of those found in OSslc, and no further work is recommended.

Occurrence 8-14

This occurrence lies just across a small ravine and on the opposite side of a small anticline from Occurrence 8-13. Mineralization

here occurs in equivalent stratigraphy to that hosting Occurrence 8-13. Smithsonite was observed cementing angular siltstone breccia fragments in a zone 1.5 meters thick and 4.0 meters long. One rock geochem analysis of a talus specimen yielded 5900 ppm zinc and 0.8 ppm silver. No further work is recommended.

Occurrence 8-15

Zinc-rich fissile black shale, considered part of Dvc, reacted positively to zinc test solution at Angie 1977 grid location L22N, 11+00W. One specimen assayed 6600 ppm zinc and 0.7 ppm silver. No further work is recommended.

Occurrence 8-17

Smithsonite was discovered as fracture fillings in black calcareous argillite at this occurrence, which may be related to occurrences 8-1 and 8-12. No assays were taken and no further work is recommended.

Occurrence 8-19

Situated about 1200 meters along strike to the northwest from the Ross Showing, this occurrence is just an extension of mineralization seen at that showing. Calcareous, black, grey weathering siltstone and argillite react positively to zinc test solution in a zone 1 meter wide and 50 meters long. Two grab samples assayed 0.5 percent and 0.4 percent zinc and a trace of silver.

Occurrence 8-20

Located downslope to the west of the main Angie Showing, this mineralized talus occurrence was later connected to the Angie Showing by cat trenching (described in Section 11.5). Initial hand trenching (Trench A5) carried out turned up only more mineralized talus of similar character but lesser grade (1.3% zinc) to that found at the Angie Showing.

Occurrence 8-22

This occurrence was located just east of the Ross Showing in a creek bed cross-cutting the stratigraphy. Positive reaction to zinc test solution was obtained over a 65-meter section of graphitic black shale outcropping along the creek and smithsonite was noted in quartz sweats and in fractures. The occurrence may be related to the mineralized sections on Mount Ross

Occurrence 8-25

A section of Mississippian chert 4 meters wide and 16 meters long hosts impure barite and pyrite mineralization at this occurrence on the Lapie River. No further work is recommended.

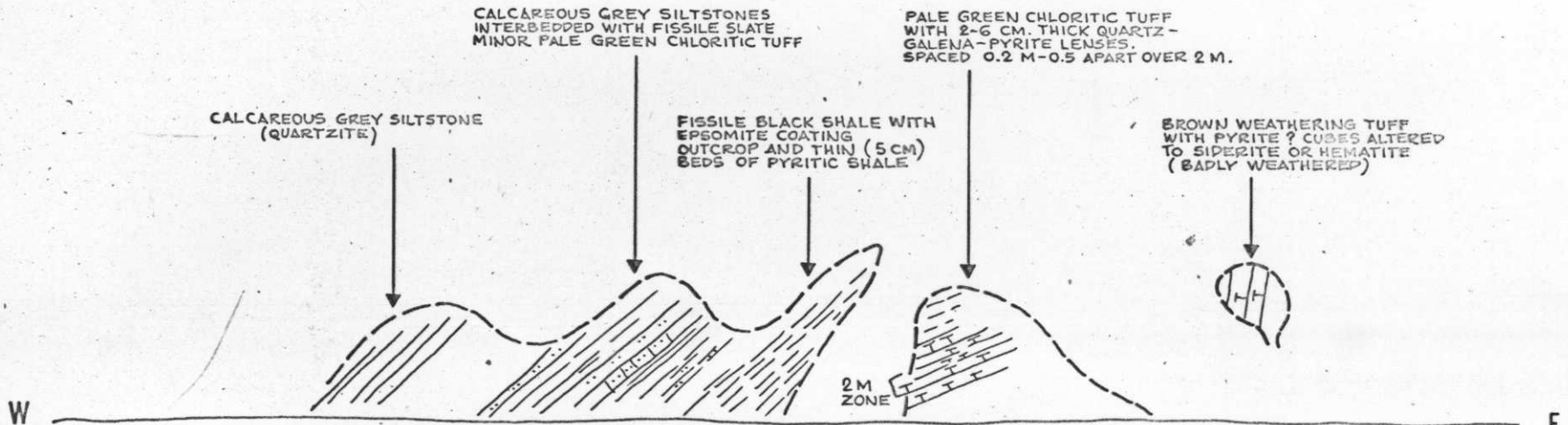
Occurrence 8-28

At this occurrence in Ram Creek, galena and sphalerite were discovered as disseminations in parallel concordant 1 centimeter thick quartz veins spaced 20 to 50 centimeters apart over 2 meters in green chloritic tuff (Fig. 42). The mineralization made up only an estimated 10 percent of the quartz veins it occupied. No assays were taken as visual estimates of mineralization indicated very low grades. Although no further work is recommended, it should be noted that this stratigraphy, which is interpreted as Mississippian in age, appears identical to that found hosting the Pyrite Showing[1], a bedded, baren massive sulphide occurrence on the Lapie River.

Occurrence 8-30

This occurrence, which appears related to Occurrences 8-13 and 8-14, is comprised of sphalerite, smithsonite, and hydrozincite occurring in

[1] Archer, Cathro & Associates, Northern Cordillera Mineral Inventory, 1978, N.T.S. 105F, Occurrence 43.



VIEW LOOKING NORTH

FOR LOCATION SEE PLATE II-2

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT

SOUTH ANGIE GRID

RAM CREEK SHOWING

No. 8 - 28

Scale: 1 CM. = 10 M.	Date: JUNE 1978	N.T.S. 105 F15
Revised:	By: F. FOSTER	Fig. 42

fractures and breccia matrix most likely formed during folding of the OSslc limestone they occur in. Inspection of two old prospectors adits found in a nearby cliff face did not reveal the presence of any sulphides. No assays were taken and no further work is recommended.

Occurrence 8-32 (East Angie Showing)

Initially discovered as smithsonite talus on the ridge top, this occurrence was determined to lie in black silty limestone at exactly the same stratigraphic level as the Angie Showing 5 kilometers to the northwest. Hand specimens assayed as follows:

Sample	Zn (ppm)	Ag (ppm)
78AR209	4200	4.0
78AR210	920	2.6
78AR211	2500	3.5
78AR212	17000	1.6
78AR213	970	1.8
78AR214	27000	13.2
78AR215	55000	16.0

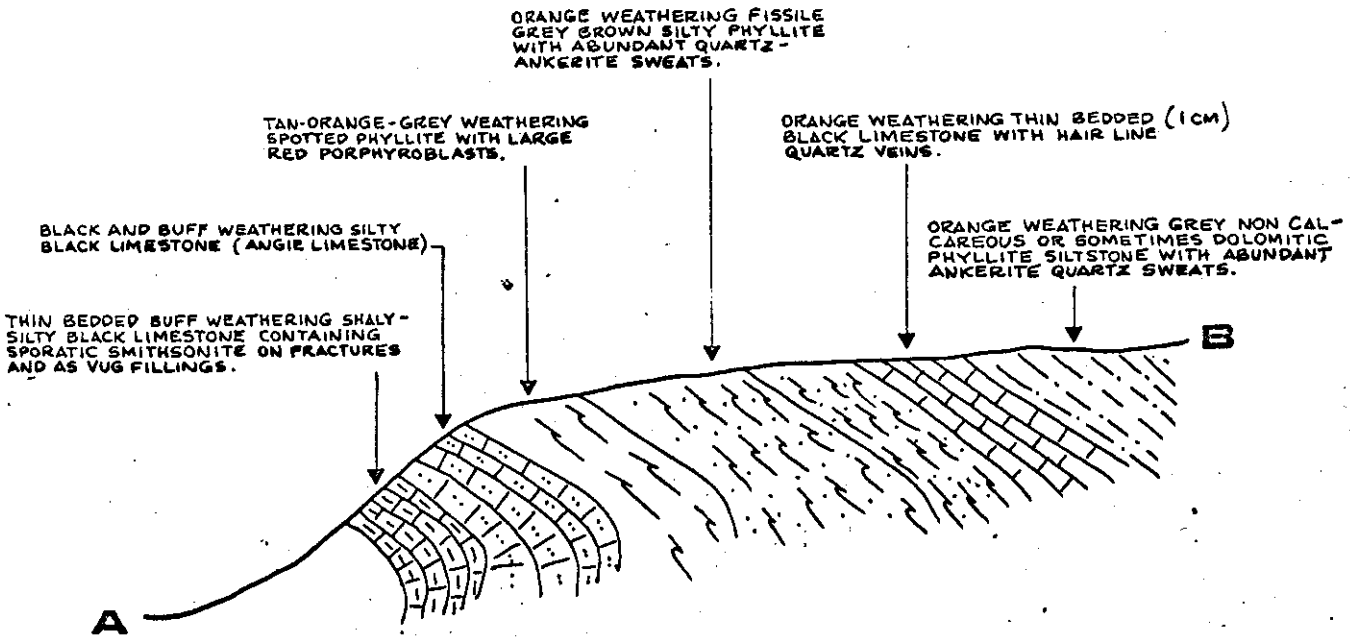
Hand trenching was later carried out (described in Section 11.5.3) but results were not encouraging.

Occurrence 8-33

This occurrence, situated near occurrence 8-32, is believed to be structurally related to that showing. Smithsonite mineralization occurs on fractures, and as blebs and disseminations in black siliceous quartzite and limestone which form an erosional remnant of limited thickness capping the ridge. Specimens assayed as follows:

Sample	Zn (ppm)	Ag (ppm)
78AR207	21500	3.6
78AR208	3250	0.2
78AR216	5800	1.0

Because of the limited extent of the erosional remnant, no further work is recommended on this occurrence.



VIEW LOOKING EAST

FOR LOCATION SEE FIG. 37

FOR LITHOLOGIC LEGEND SEE APPENDIX I

ALL LITHOLOGIES WITHIN D.V.C.

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT

SOUTH ANGIE GRID

CROSS SECTION A–B

EAST ANGIE SHOWING (8–32)

Scale: 1:1000	Date: JULY 1978	N.T.S. 105 F 1
Revised:	By: F. FOSTER	Fig. 43

Occurrence 8-35

Siltstone breccia float containing interstitial smithsonite was located at the base of a talus slope on the north side of Mount Ross. The float was noted over a strike-length of 600 meters but the source of the float was never found. Specimens of the float assayed 6,000 and 48,000 ppm zinc and 5.6 and 4.2 ppm silver. The proximity of this occurrence to numerous other minor occurrences on Mount Ross should be noted.

Occurrence 8-36

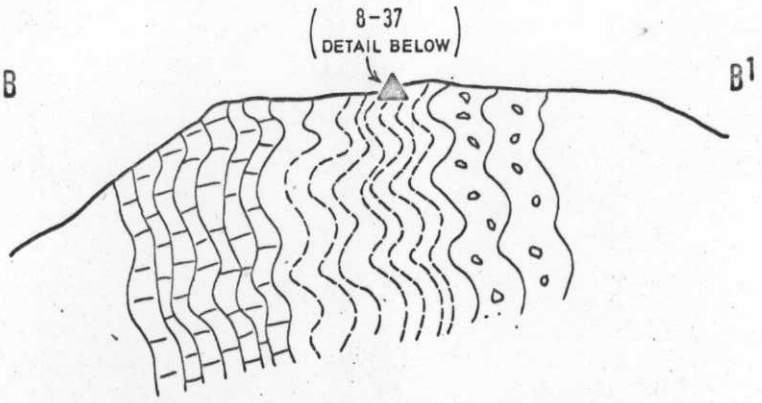
This occurrence is situated just west of the East Angie Showing (Occurrence 8-32) on a south-facing forested hillside. The mineralized float found on this hillside is believed to come from extensions of the East Angie Showing 200 meters to the east which underlie the hillside. Figure 37 in Section 11.5 shows that the float, consisting of sooty grey, sometimes brecciated, limestone and argillite with smithsonite filling veins and cavities, forms a fan 25 meters wide up to 100 meters down the hillside. Specimens assayed ran up to 2 percent zinc with no silver.

Occurrence 8-37

This occurrence, located just east of the main Angie showing on the crest of a large spur, is identical in rock type and habit of mineralization to Occurrence 8-36. Figure 44 shows the results of chip sampling and mapping carried out at this occurrence. Based on results obtained, no further work is recommended.

Occurrence 8-38

This occurrence was discovered as the result of follow up to grid-controlled geochemical surveys on Mount Ross. The occurrence, which is



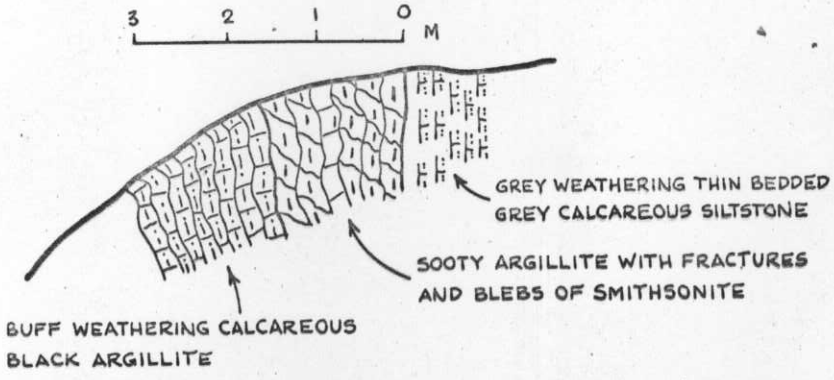
SCALE 1:2500 LOOKING NORTHWEST

CHIP SAMPLE

Sample	Interval	Zn. %	Ag.oz.
840	0-2.0 M.	0.19	0.08
841	2.0-3.0 M.	0.10	0.06

SELECTED SPECIMENS

Sample	Zn. ppm	Ag. ppm
AR55	3000	3.0
AR56	1520	3.2
AR57	650	2.0
AR58	1920	4.2



SCALE 1:75 LOOKING NORTHWEST

FOR LOCATION SEE PLATE II-2

FOR LITHOLOGIC LEGEND SEE APPENDIX I

SAMPLED BY: F. FOSTER

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
SHOWING 8-37

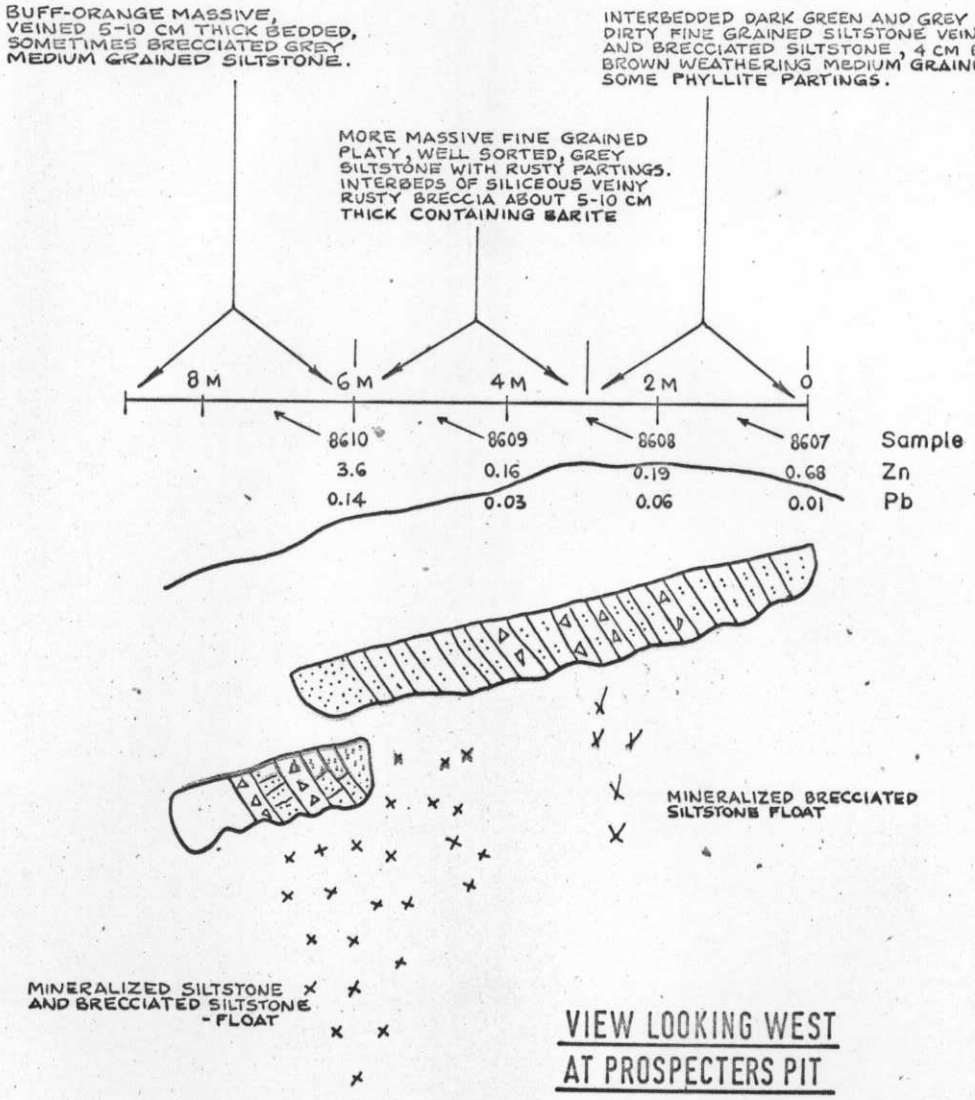
Scale: AS SHOWN	Date: JULY 1978	N.T.S. 105 F 15
Revised:	By: F. FOSTER	Fig. 44

hosted within SDsq quartzite and interbedded siltstones, is considered part of the thick sequence of weakly mineralized stratigraphy occurring beneath Mount Ross, of which the Ross Showing is the best exposed mineralization to date. Figure 45 shows results of crude chip sampling of mineralized subcrop. Assays for zinc ran as high as 3.6 percent.

Occurrence 8-39

Also discovered as the result of follow up on grid-controlled geochemical surveys in the area of a 3 percent zinc soil anomaly on Mount Ross, this occurrence is also considered related to the series of showings which are hosted in the thick sequence of weakly mineralized Mount Ross stratigraphy. Limited amounts of grey phyllitic siltstone scree on a moss-covered slope showed no visible sulphides but reacted strongly to zinc test solution. Specimens sent for assay yielded the following values:

Sample	Zn (ppm)	Ag (ppm)
690	130	0.4
691	24,000	2.2
692	15,000	1.2
693	15,000	3.6



VIEW LOOKING WEST
AT PROSPECTERS PIT

SELECTED
SPECIMENS GEOCHEMED.

Sample	Zn. ppm	Ag. ppm
AR 694	4000	0.6
AR 695	630	0.6
AR 696	240	0.2
AR 697	2000	0.6
AR 698	1000	0.2
AR 699	430	0.6

FOR LOCATION SEE PLATE II-2.

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
Showing (8-38)
MT. ROSS AREA

Scale: 1:100	Date: AUGUST 1978	N.T.S. 105 F15
Revised:	By: F. FOSTER	Fig. 45

11.7 GEOCHEMISTRY

11.7.1 Method of Survey, Analysis and Treatment of Date

Detailed soil geochemical surveys were completed over the 1978 Angie grid extensions in an attempt to define any yet undiscovered lead and zinc occurrences and to aid in projecting the contacts for existing mineralization into areas of overburden. A total of 3200 samples was collected over 78.4 kilometers of cutline grid.

Recce flagline grid-controlled geochemical surveys were also carried out in specific areas of interest for the purpose of tracing potential extensions of recently discovered showings or establishing the presence of any geochemical anomalies in areas of potential interest where geological evaluation was hampered by extensive moss and overburden cover. A total of 500 samples was collected in 24 kilometers of flagline grid.

In addition to these grid-controlled soil sampling surveys, further reconnaissance surveys consisting of stream sediment silt sampling were conducted both on and off the claim block in conjunction with prospecting.

Geochemical samples were taken, with the aid of a prospector's grub hoe, at 25-meter intervals along cut lines spaced 150 meters apart. On flagline grids sample spacing was determined on each grid according to the suspected nature and extent of the potential host horizons.

In areas of extensive talus, where no soil was available, rock chip samples were taken instead of soil samples. All samples

were collected in Kraft brown paper bags and dried prior to shipment for analysis. All samples were analyzed by Acme Analytical Labs in Ross River, Yukon. When the samples were received, each was dried while in its Kraft bag, then screened to 80 mesh, weighed out to 0.5 grams and digested in hot aqua regia. Rock samples were crushed and pulverized before undergoing this process. Samples were then diluted, clarified for 20 hours and then tested for lead and zinc content with an atomic absorption spectrophotometer. Accuracy of the instrument ideally is 1 percent of the amount of metal present. Individual cathode lamps were used for each element determination, a direct readout being given in parts per million of the element being tested.

All geochemical assays were returned to the field where anomalous results were plotted and followed up.

11.7.2 Interpretation of Results

Separate geochemical maps were prepared showing values obtained for silver and zinc. All cut line grid geochemical data maps, which included results from 1977 and 1978, were sent to the head office of Getty Oil Ltd. in Los Angeles where the data was subjected to statistical and trend surface analyses by means of computer.

As the results of the Los Angeles computer work are not available at the time of this writing, provisional, manually contoured, geochemical maps have been supplied. These maps, (Plates 11-5 and 11-6), combine the contoured data from 1977

with this year's survey extensions contoured to a common statistical base. Larger scale contour maps, (Plates 11-8 and 11-9) are also provided for reference to individual geochemical values obtained.

Results of recce flagline grid geochemical surveys are presented in Figures 46 to 54 in this section. This data has been contoured utilizing the statistical base established in 1977[1].

All results are contoured and colour coded by anomalous population. In addition the most pertinent geochemical anomalies are illustrated on the overlay for Figure 1.

Results from reconnaissance silt and contour soil sampling surveys are presented separately on Plate 11-7.

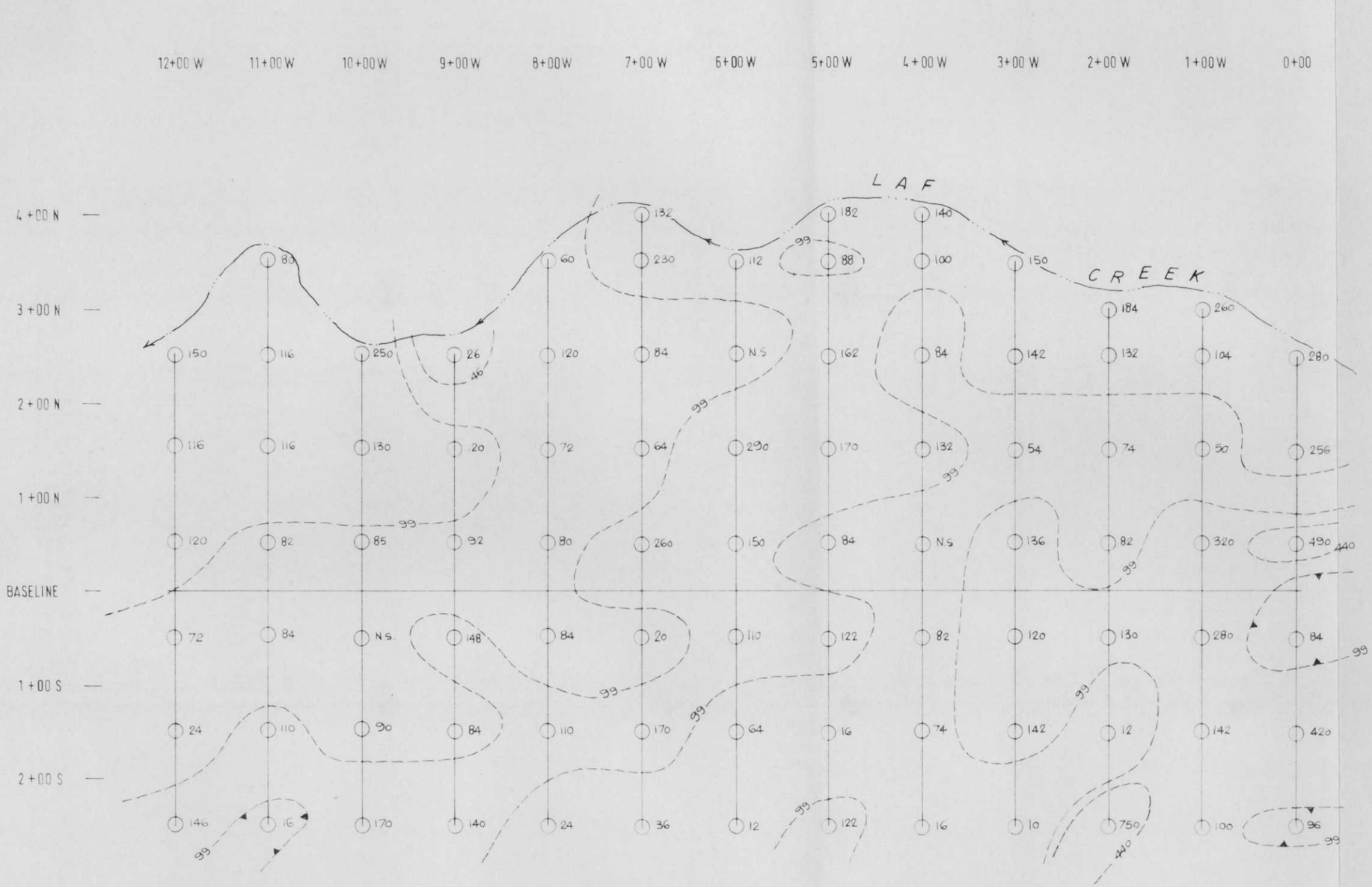
a) LAF-1 Grid

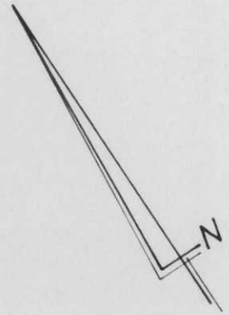
Figures 46 and 47 show that zinc and silver responses over the LAF-1 Grid are very weak. Only two isolated values anomalous in zinc (750 ppm) were obtained. No anomalous values were obtained in the vicinity of the LAF Occurrence, the discovery of which prompted the installation of the grid; however this may be attributed to the sampling difficulties experienced due to frozen ground.

b) LAF-2 Grid

Analysis of soil samples from this grid revealed a series of roughly coincident threshold zinc-silver anomalies stretching across the portion of the grid situated on the south-facing

[1] Welcome North Mines Ltd. Annual Exploration Report, Woodside Project, 1977, Chapter 5, p. 25.





LEGEND

	> 1060	ANOMALOUS POPULATION
	440 - 1060	HIGH THRESHOLD POPULATION
	99 - 439	LOW THRESHOLD POPULATION
	46 - 98	BACKGROUND POPULATION
	< 46	LOW BACKGROUND

(Values in ppm.)

SOIL SAMPLE

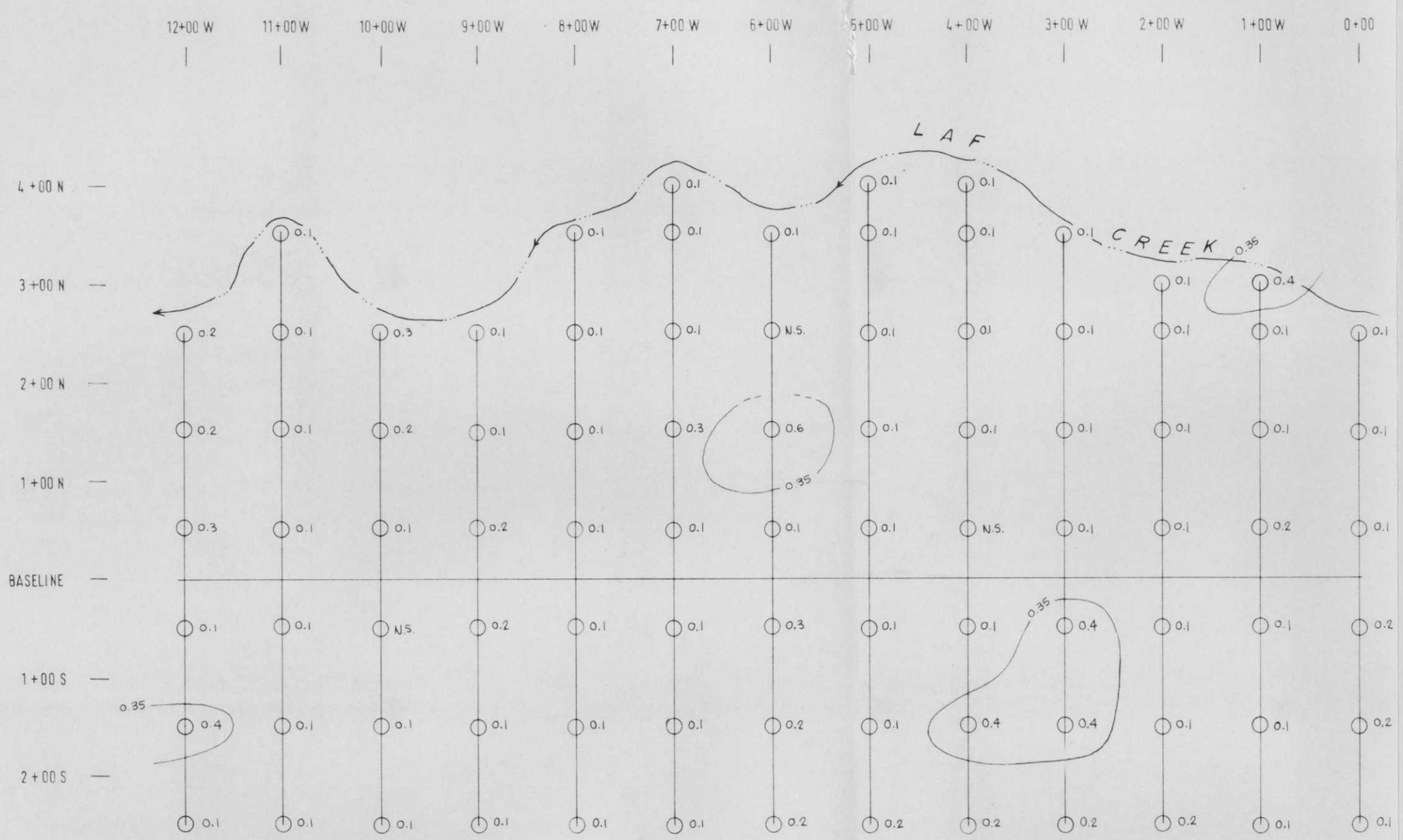
FOR LOCATION SEE PLATE II-5

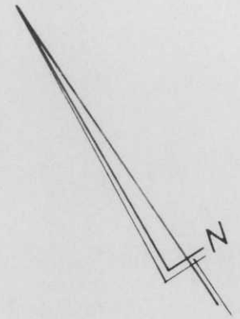
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF 1 GRID
GEOCHEMISTRY - ZINC

Scale 1 CM. = 50 M.	Date JUNE 1978	NTS 105 F 15
Revised	By	Fig 46





LEGEND

> 8.0	HIGHLY ANOMALOUS POPULATION
2.1 - 8.0	ANOMALOUS POPULATION
0.75 - 2.0	HIGH THRESHOLD POPULATION
0.35 - 0.75	LOW THRESHOLD POPULATION
< 0.35	BACKGROUND POPULATION

(Values in ppm.)

SOIL SAMPLE

FOR LOCATION SEE PLATE II-6

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF 1 GRID
GEOCHEMISTRY-SILVER

Scale 1 CM. = 50 M.	Date: JUNE 1978	NTS 105 F 15
Revised:	By:	Fig. 47

slope (Fig. 48 and 49). The absence of anomalies on the north half of the grid may be due to a permafrost problem which hampered sampling, but one isolated coincident zinc-silver anomaly was delineated on line 1+00W north of the baseline.

Geological evaluation of these anomalies could not be made due to thick moss cover throughout the grid area, however regional strike implications, the reason the grid was installed, suggest that rocks hosting these anomalies are most likely part of SDsq and may be equivalent to those rocks hosting the Ross Showing 4 kilometers to the southeast.

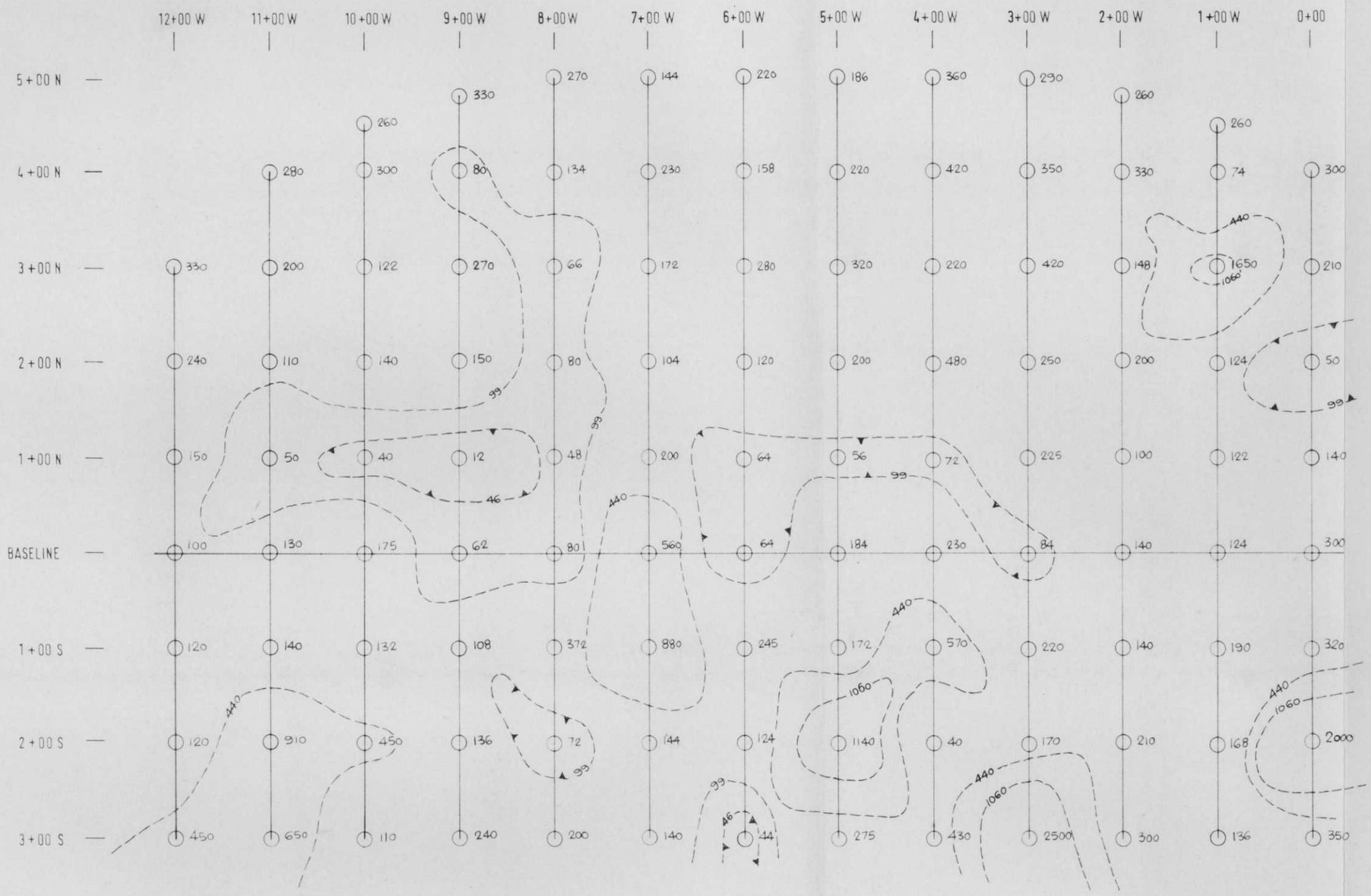
c) Pyrite Grid

The Pyrite Grid was established over an area where 10 to 20 percent pyrite mineralization had been discovered in black siliceous shales in a deeply incised creek bed late in the 1977 field season.

Soil sampling geochemical surveys were recommended for 1978 and early in the 1978 field season a flagline grid was installed and sampled. Samples collected were of poor quality due to permafrost which hampered the sampling a great deal.

Geological follow up and detailed silting in the creek bed where the initial discovery was made were prevented by snow which covered the creek into early August, at which time exploration work had shifted to the northwest.

Sampling results shown in Figures 50, 51, and 52 reveal a coincident lead-zinc-silver anomaly (215 ppm lead, 1900 ppm



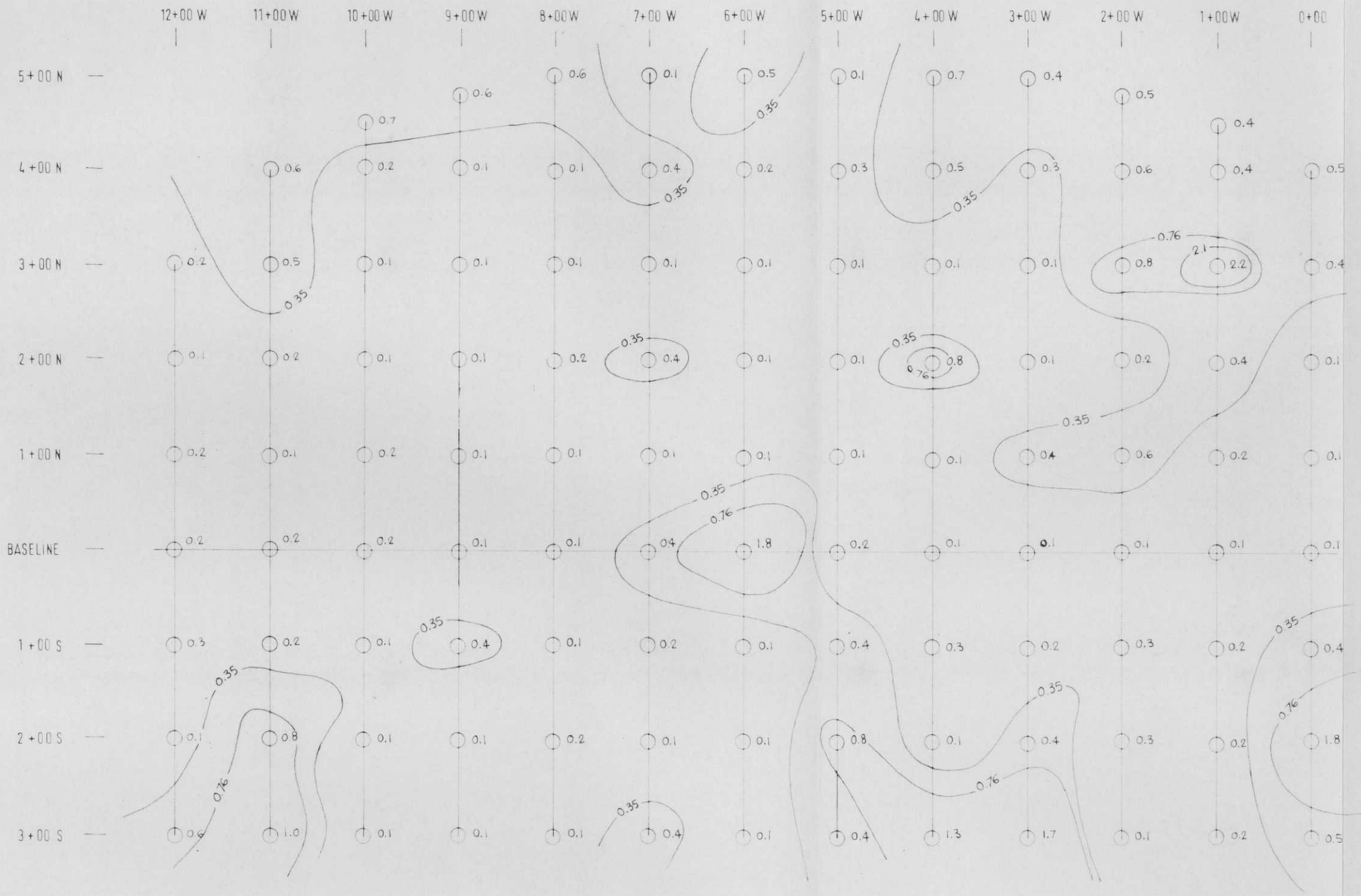
FOR LOCATION SEE PLATE II-5

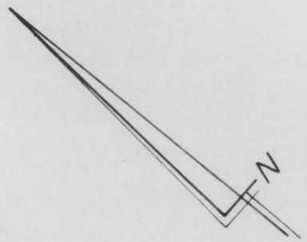
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF 2 GRID
GEOCHEMISTRY - ZINC

Scale 1 CM = 50M	Date: JUNE 1978	N.T.S. 105 F 15
Revised:	By:	Fig. 48





LEGEND

> 8.0	HIGHLY ANOMALOUS POPULATION
2.1 – 8.0	ANOMALOUS POPULATION
0.76 – 2.0	HIGH THRESHOLD POPULATION
0.35 – 0.75	LOW THRESHOLD POPULATION
< 0.35	BACKGROUND POPULATION

(Values in ppm.)

SOIL SAMPLE

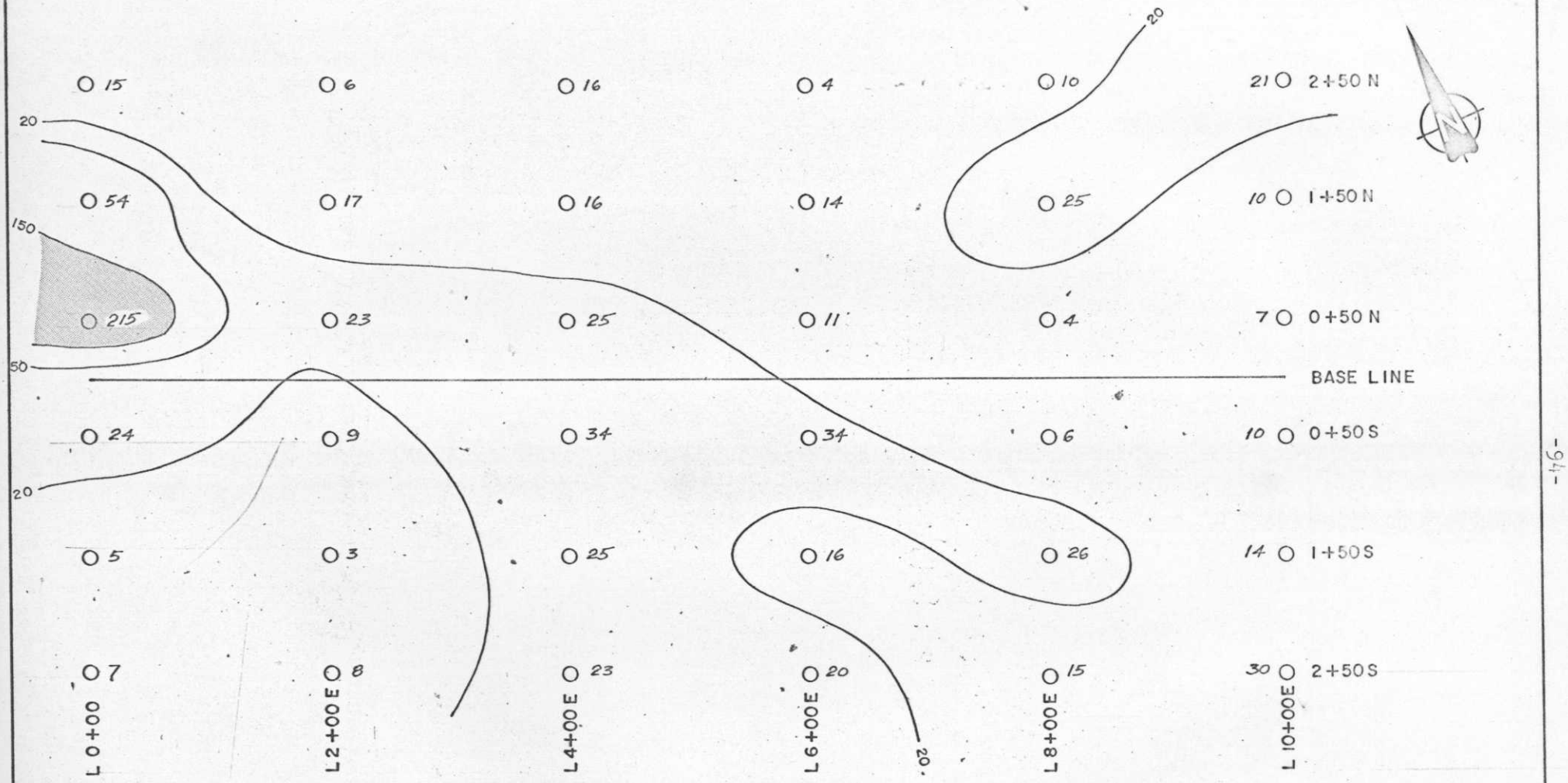
FOR LOCATION SEE PLATE II-6

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF 2 GRID
GEOCHEMISTRY-SILVER

Scale 1 CM. = 50 M.	Date JUNE 1978	N.T.S. 105 F/15
Revised	By	Fig 43



> 150 ppm

50 – 150 ppm

20 – 50 ppm

< 20 ppm

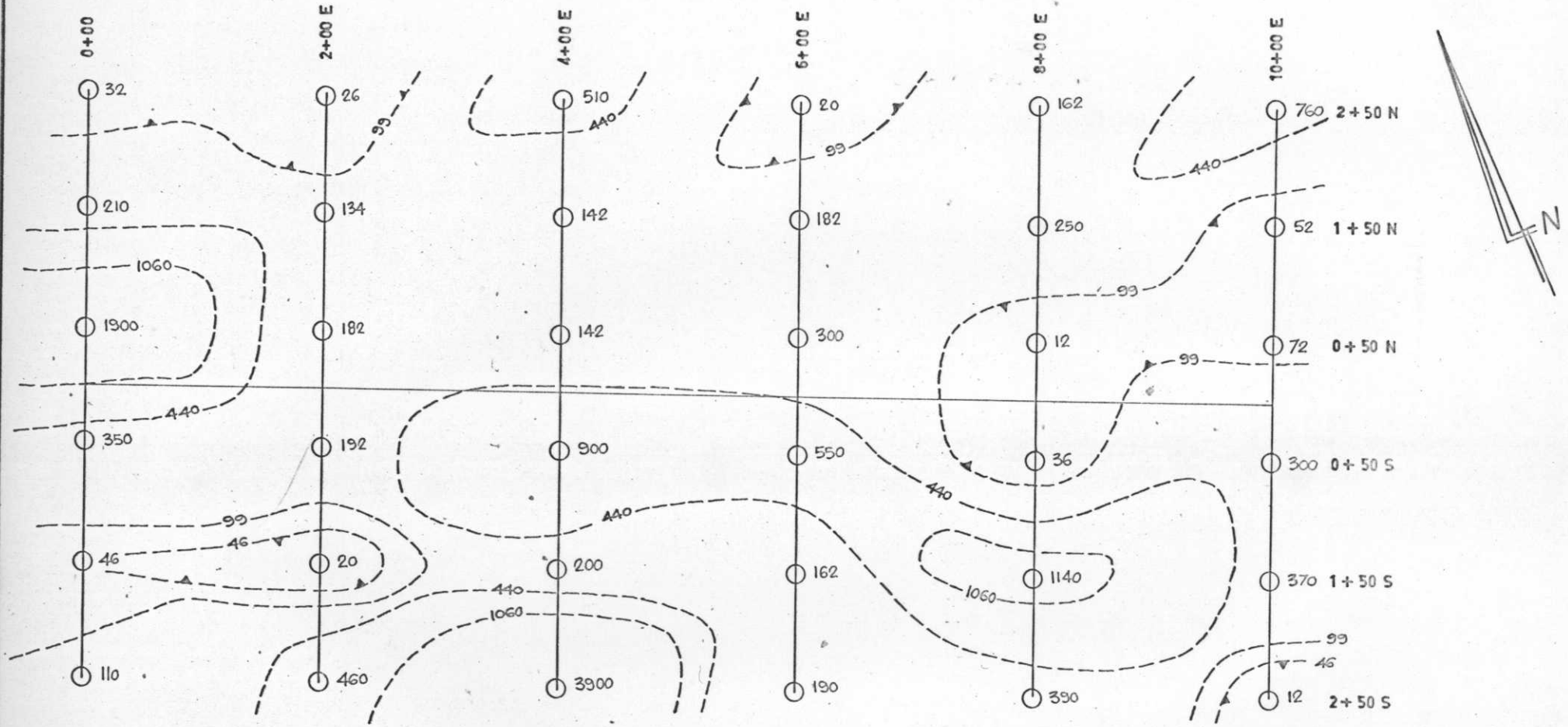
FOR LOCATION SEE PLATE II-5

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
"Pyrite Grid"
GEOCHEMISTRY – LEAD

Scale: 1 : 50	Date: OCT. 1978	N.T.S. 105 F 15
Revised:	By: F. FOSTER	Fig. 50



LEGEND

- > 1060 ANOMALOUS POPULATION
- 440 – 1060 HIGH THRESHOLD POPULATION
- 99 – 439 LOW THRESHOLD POPULATION
- 46 – 98 BACKGROUND POPULATION
- < 46 LOW BACKGROUND POPULATION

(Values in ppm.)

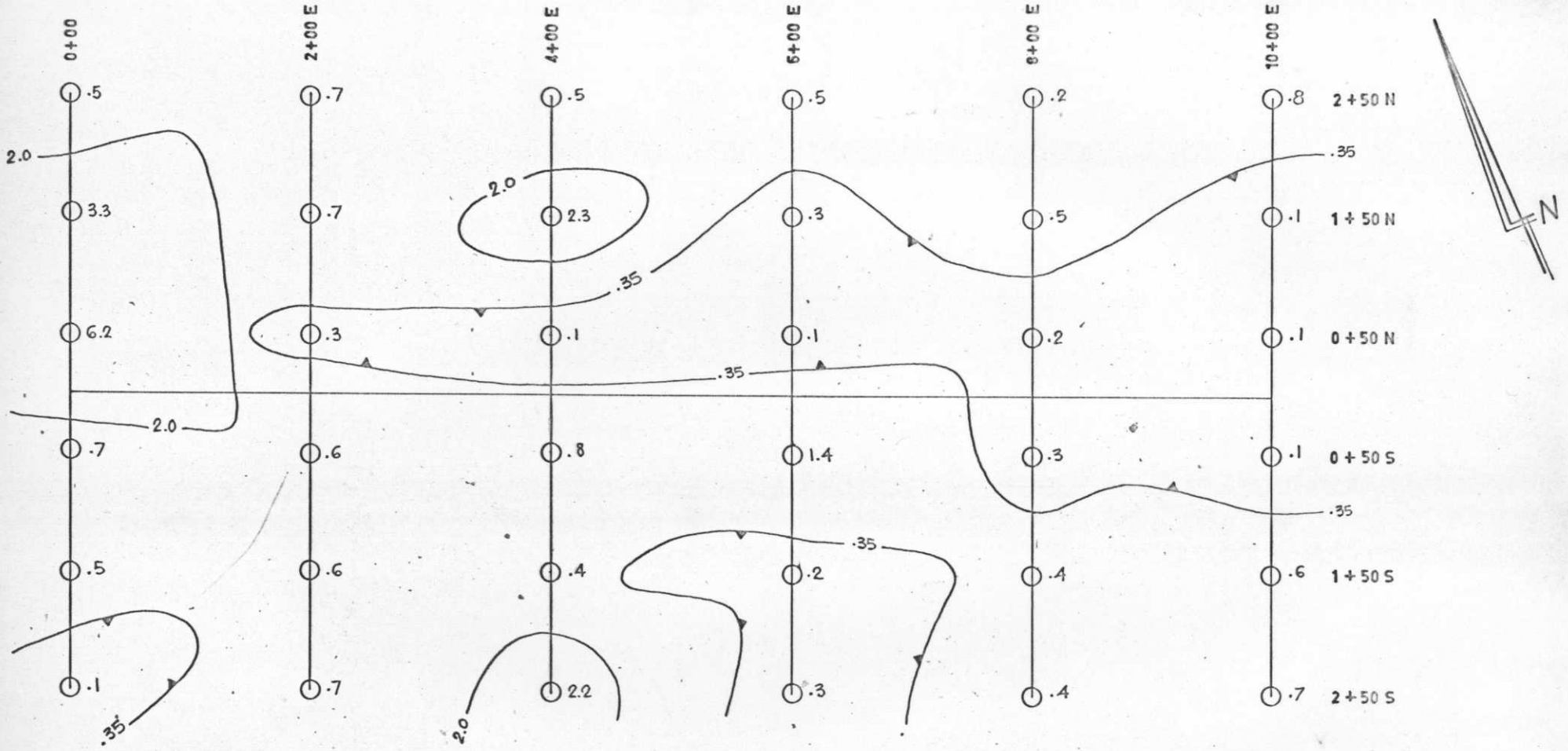
FOR LOCATION SEE PLATE 11-5

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
PYRITE GRID
GEOCHEMISTRY – ZINC

Scale: 1:50	Date: JUNE 22, 1978	N.T.S. 105 F15
Revised:	By:	Fig. 51



LEGEND

- 8.0 HIGHLY ANOMALOUS POPULATION
- 2.1-8.0 ANOMALOUS POPULATION
- 0.76-2.0 HIGH THRESHOLD POPULATION
- 0.35-0.75 LOW THRESHOLD POPULATION
- 0.35 BACKGROUND POPULATION

(Values in ppm.)

FOR LOCATION SEE PLATE II-6

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
PYRITE GRID
GEOCHEMISTRY-SILVER

Scale: 1:50	Date: JUNE 22, 1978	N.T.S. 105 F 15
Revised:	By:	Fig. 52

zinc, 6.2 ppm silver) at L0+00E, 0+50N which is open to the west, and a coincident zinc-silver anomaly (3900 ppm zinc, 2.2 ppm silver) at L4+20E, 2+50S. Besides these anomalies, higher, coincident background values in lead, zinc, and silver occur in a zone trending along the baseline, an area where steep banks drop into the snow-filled creek bed.

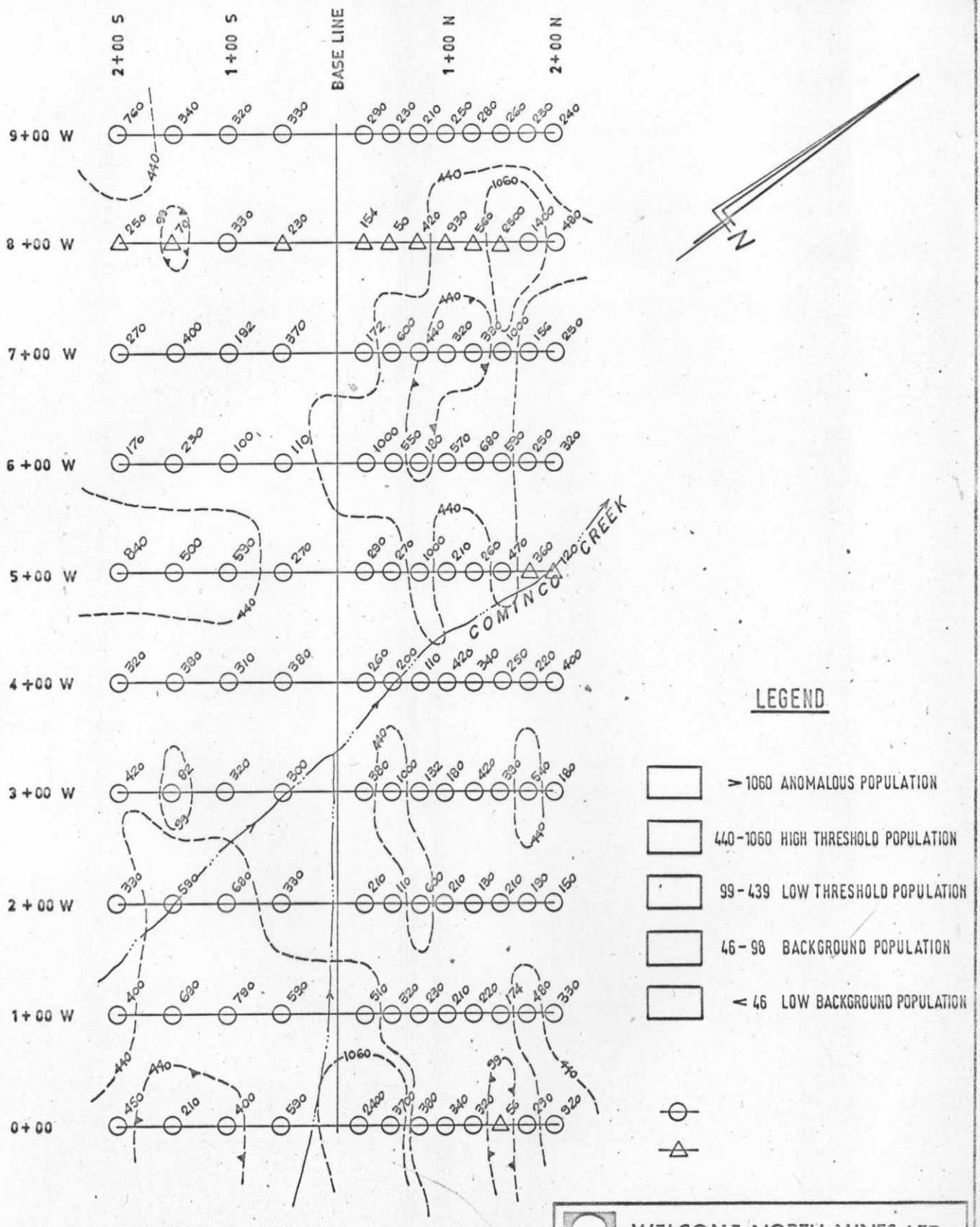
d) DJ Grid

The DJ Grid was installed and soil sampled in an effort to trace mineralization found at the Angie and its extension, Occurrence 8-20, through overburden (Plate 11-2), across the headwaters of Cominco Creek, to an area of thick moss cover on the opposite creek bank. Results of the geochemical surveys over this grid (Fig. 53 and 54) revealed that coincident zinc-silver anomalies exist on both sides of Cominco Creek. These anomalies were later extended farther west by the geochemical surveys over the cutline grid (Plates 11-5 and 11-6). Subsequent follow-up prospecting failed to locate any mineralized float in the area immediately west of Cominco Creek.

e) Angie Grid

Results of sampling conducted over the 1978 Angie Grid are presented together with results from geochemical surveys carried out over the 1977 Angie Grid on Plates 11-5 and 11-6.

Coincidence between ridge tops and geochemical highs is apparent on these maps, which suggests that true bedrock values may not be reflected by the sampling in overburden-covered areas on ridge flanks and valley bottoms.



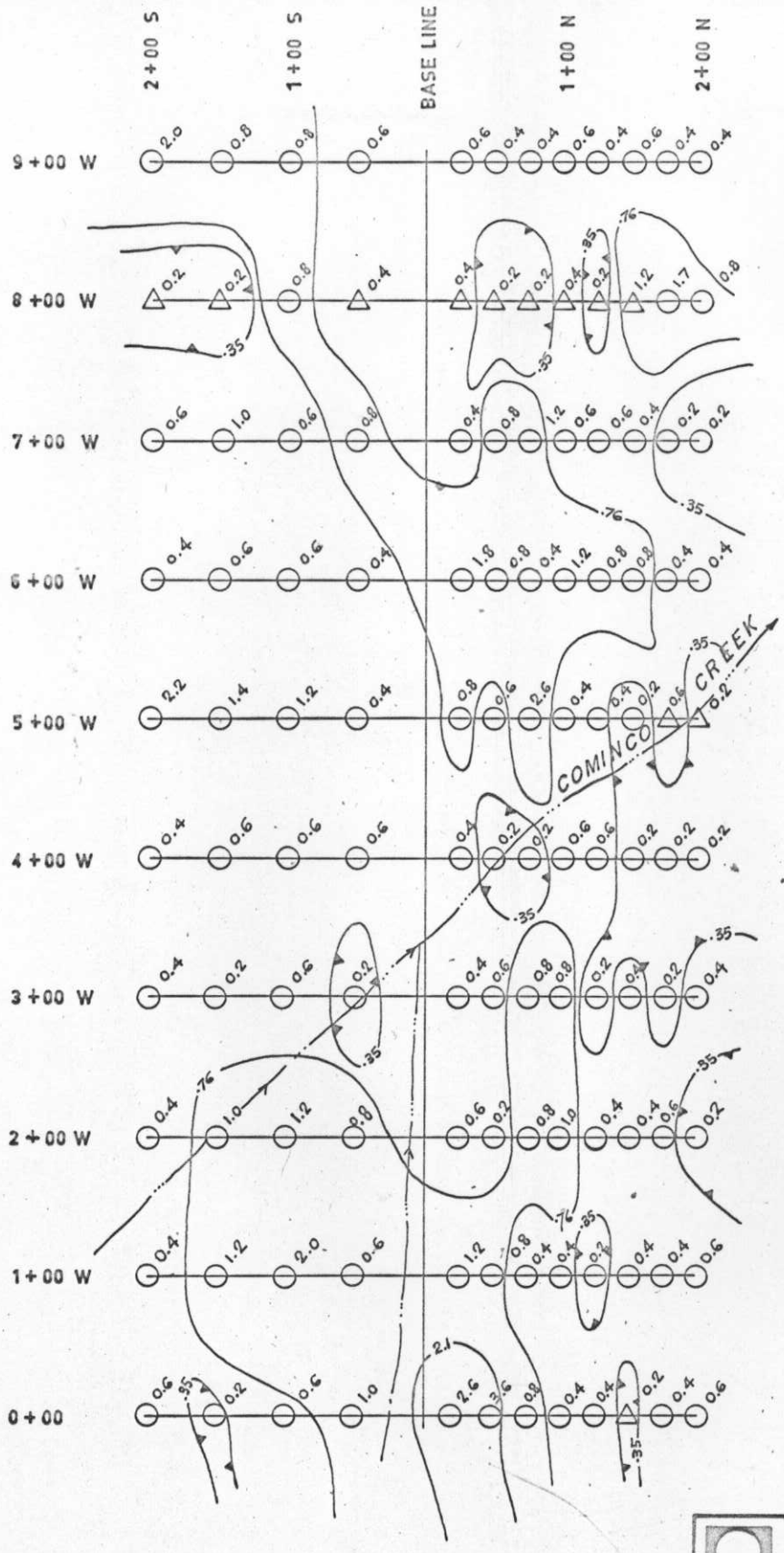
FOR LOCATION SEE PLATE II-5

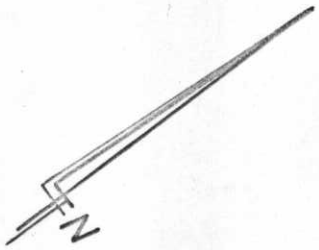
WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
DJ GRID
GEOCHEMISTRY - ZINC

Scale: 1:50	Date: JUNE 22, 1978	N.T.S. 105 F 15
Revised:	By:	Fig. 53





LEGEND

- >8.0 HIGHLY ANOMALOUS POPULATION
- 2.1-8.0 ANOMALOUS POPULATION
- 0.76-2.0 HIGH THRESHOLD POPULATION
- 0.35-0.75 LOW THRESHOLD POPULATION
- 0.35 BACKGROUND POPULATION

(Values in ppm.)

- SOIL SAMPLE
- ROCK CHIP SAMPLE

FOR LOCATION SEE PLATE 11-6

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
DJ GRID
GEOCHEMISTRY-SILVER

Scale: 1" 50	Date: JUNE 22,1978	N.T.S. 105 F15
Revised:	By:	Fig. 54

Zinc and silver are consistently coincident in their responses, however the silver responses appear to be much more restricted in their extent. This may serve as a useful tool during follow-up prospecting of geochemical anomalies.

Extensive zinc anomalies (up to 30,000 ppm over small areas) coincide with the mapped limits of units 4c and 5a stratigraphy, (plate 4-2, the horizons hosting the Angie Showing, the Lower Angie Showing, the North Angie Showing and part of the Ross Showing, in the Angie Ridge - Mount Ross area. Although the anomalies are strongest on the ridge crests they do reflect the above-mentioned showings. It should be noted that these anomalies do extend along strike into more overburden-covered areas between the Angie and the Ross Showings and appear to reflect the mapped limits of weakly mineralized 4b and 4c stratigraphy which extends between the two showings. The stronger sections of the Angie Ridge anomalies appear to be terminated by a fault which intersects the west baseline near line 4+50W.

Extensive geochemical anomalies on both the north and south-facing slopes of the spur extending east from Mount Ross confirm showings which have been located to date, and indicate extensions to the southeast. Prospecting in areas of these extensions has been carried out but thick moss cover has hampered proper evaluation.

Less extensive zinc geochemical anomalies which signify the Angie Showing appear to trend across the headwaters of Cominco Creek and west of the DJ Grid as strong (>1060 ppm zinc), spotty anomalies similar to those found south of the Ross

Showing. This trend of geochemical responses requires further follow-up prospecting.

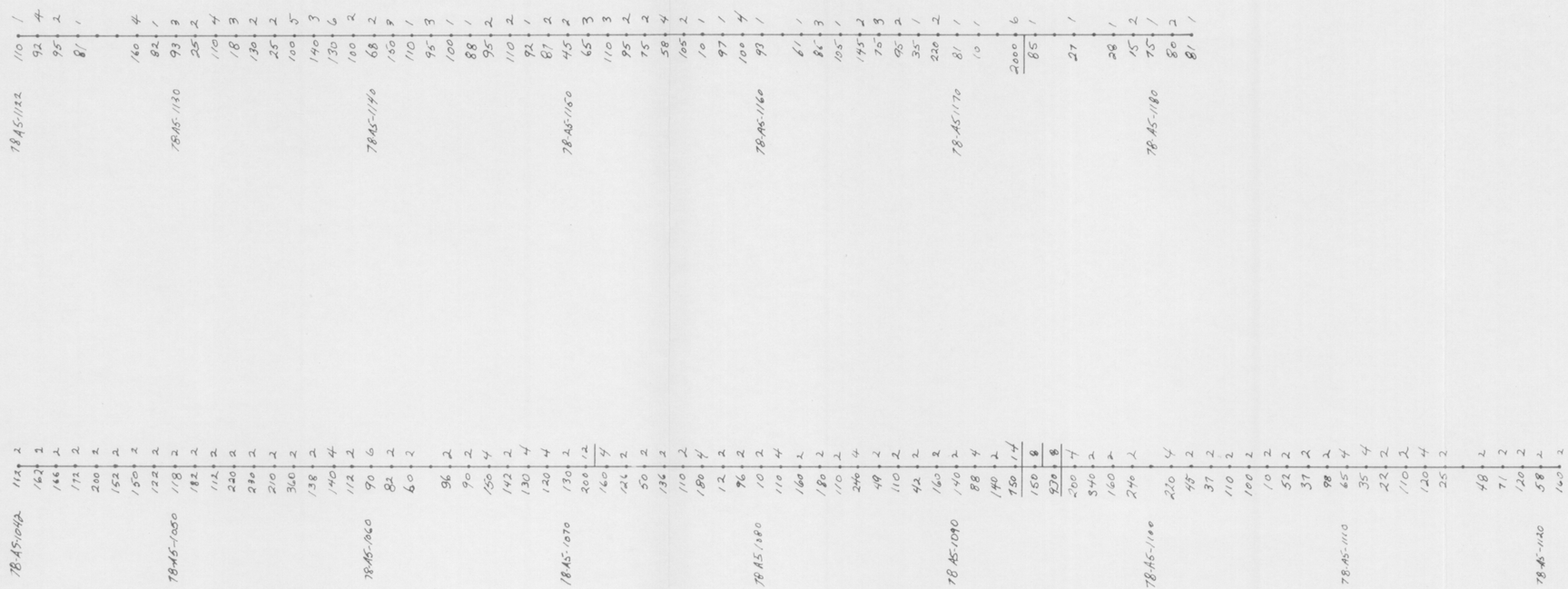
At the southeastern end of the East Angie Grid, zinc geochemical responses again appear strongest over mapped sections of 4b and 5a stratigraphy (4c absent here). Showings 8-33 and 8-36 were delineated only by restricted anomalies while the East Angie Showing appears to have no geochemical signature at all (possibly a function of the gridline positions).

f) Reconnaissance Surveys

The reconnaissance surveys, the results for which are plotted on Plate 11-7, aided in the discovery of the mineral occurrences described in Section 11.6. Anomalous results were obtained in the drainages originating in the Angie Ridge and Mount Ross areas as well as on slopes and in drainages south and west of Mount Ross. Anomalous results generally seem restricted to a northwest-trending zone which encompasses the Siluro-Devonian stratigraphies hosting the Angie and Mount Ross mineral occurrences and numerous other minor occurrences[1] (compare Plates 11-2 and 11-7). The area southeast of Angie Ridge is indicated to be much less geochemically anomalous.

Results of two soil sampling lines run just north of the LAF Showing (Plate 11-7) are presented in Figure 55. They are not encouraging, showing only two very restricted anomalies, the values for which are underlined in the figure.

[1] See Section 11-6 for descriptions.



LEGEND

ZINC (PPM)	SILVER (PPM)
0-500 BACKGROUND	0-.7 BACKGROUND
>500 ANOMALOUS	>.7 ANOMALOUS

NOTE: WHERE UNDERLINED ANOMALOUS

ZINC (PPM) | SILVER (PPM)

SAMPLE No. - 78-A5-1180

FOR LOCATION SEE PLATE II-5

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT

RECCE SOIL GEOCHEMISTRY NORTH OF LAF SHOWING

Scale: 1cm = 50m	Date: FEB 1979	N.T.S. 105 F/15
Revised:	By:	FIG. 55

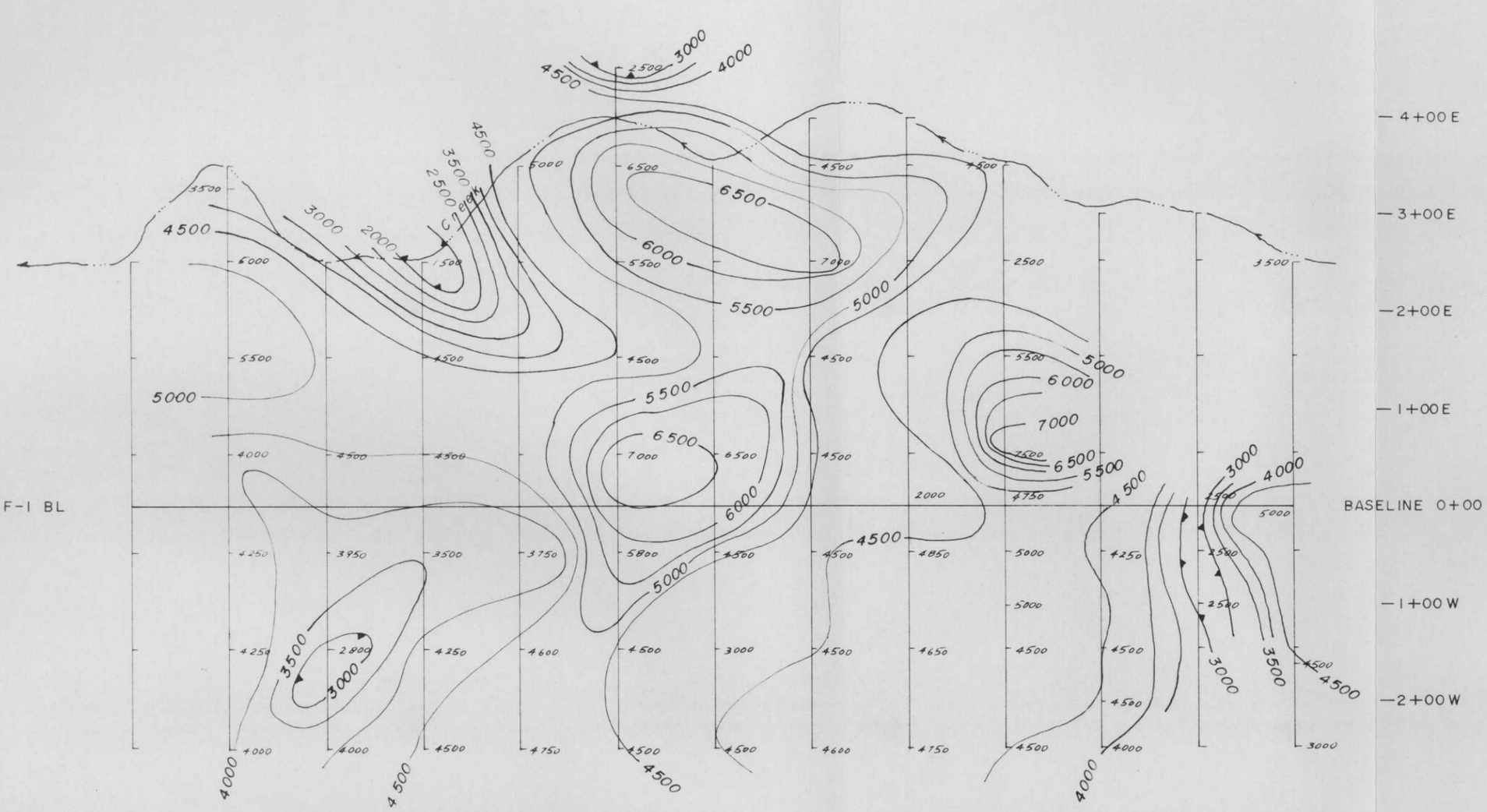
11-8 GEOPHYSICS

Preliminary magnetometer surveys were carried out over the LAF-1 and LAF-2 flagline grids (Fig. 56 and 57), following the discovery of significant compass variations during the installation of these grids for geochemical surveys. The surveys, which were designed to establish whether more sophisticated surveys were warranted over the area, were conducted utilizing a small pocket magnetometer which measures only total magnetic field strength on a coarsely graduated scale. Closures were established throughout the surveys to determine any magnetic drift and to facilitate the correction thereof.

Results of the survey over the LAF-1 Grid (Fig. 56) show two broad (up to 800 meter by 300 meter) magnetic highs with residual peaks of 2000 gammas or more. Further magnetic highs appear to be building to both the east and west of the grid as is evidenced by the open gradients at opposite ends of the survey area.

Results of surveys conducted over the LAF-2 Grid (Fig. 67) show weaker magnetic relief than that found on the LAF-1 Grid. Part of a residual magnetic high of about 1500 gammas has been delineated by the restricted survey on line 8+00W just north of the baseline.

Both the magnetic surveys indicated that the area warrants further surveys. Although extensive overburden and moss cover prevents adequate geological evaluation, float reported in the survey areas suggests that the magnetic anomalies may be caused by pyrrhotite-bearing black shale and phyllite. Since major shale-hosted lead-zinc-pyrite-pyrrhotite massive sulphide deposits have been found in Ordovician rocks such as these, the source of the magnetic anomalies in these rocks should be thoroughly investigated.



NOTE

READINGS IN GAMMAS

CONTOUR INTERVAL = 500 GAMMAS

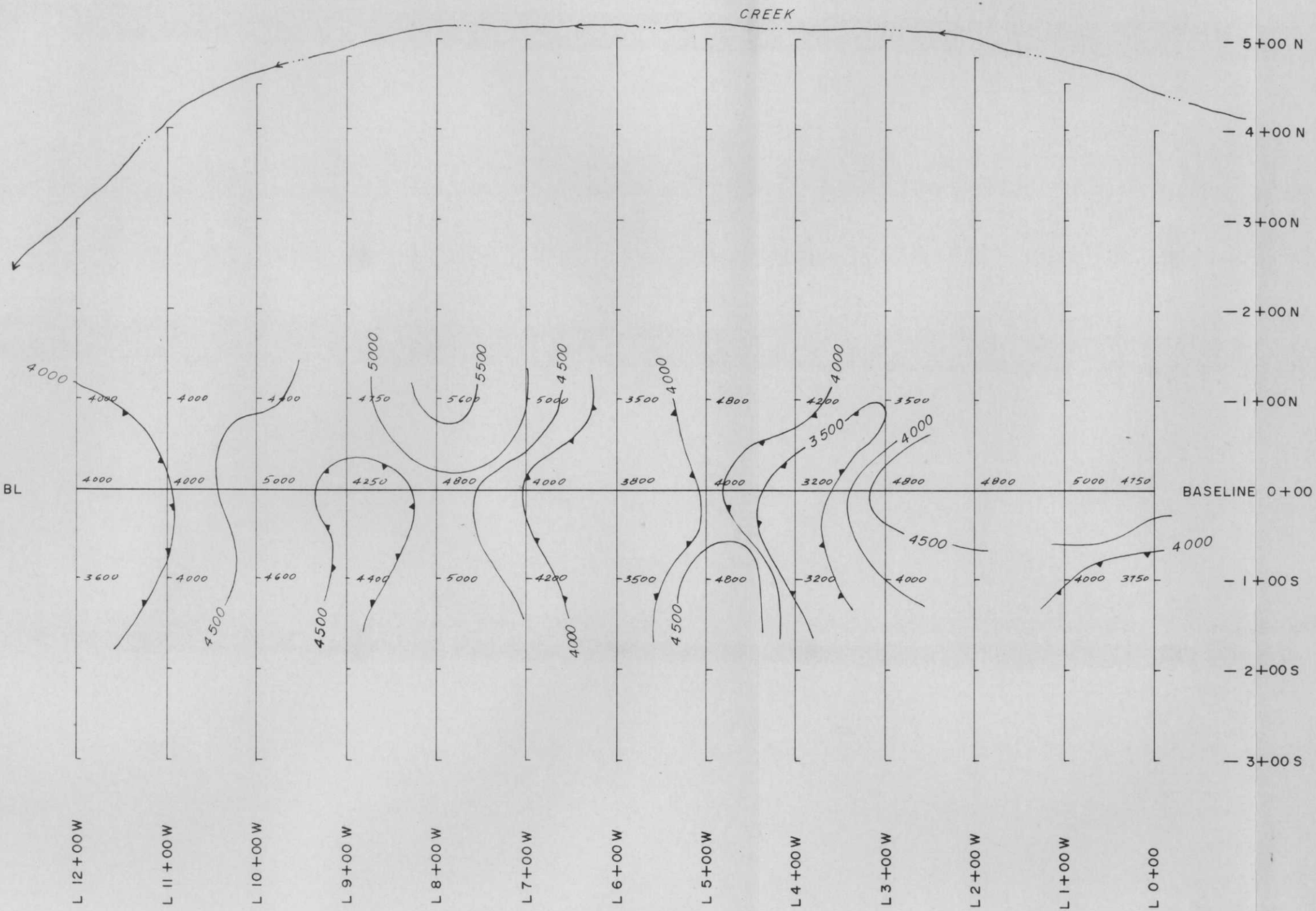
FOR LOCATION SEE PLATE 11-2

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF-I GRID
PRELIMINARY MAGNETOMETER SURVEY

Scale 1 : 5,000	Date: DEC. 1978	N.T.S. 105 F 15
Revised:	By: R. Holland	Fig. 56



NOTE

READINGS IN GAMMAS

CONTOUR INTERVAL = 500 GAMMAS

FOR LOCATION SEE PLATE II-2

WELCOME NORTH MINES LTD.

GETTY MINING PACIFIC LTD.

WOODSIDE PROJECT
SOUTH ANGIE GRID
LAF-2 GRID
PRELIMINARY MAGNETOMETER SURVEY

Scale 1 : 5,000	Date: DEC. 1978	N.T.S. 105 F 15
Revised:	By: R. Holland	Fig. 57

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1978: Northern Cordillera Mineral Inventory

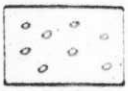
Tempelman-Kluit, D.J.
1977: Geol. Surv. Can.; Open File 486

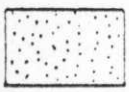
Welcome North Mines Ltd.
1977: Annual Exploration Report, Woodside Project

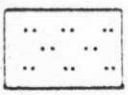
APPENDIX I

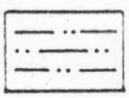
TABLE OF LITHOLOGIC SYMBOLS

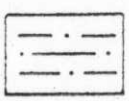
LITHOLOGICAL SYMBOLS USED IN CROSS-SECTIONS AND STRATIGRAPHIC COLUMNS

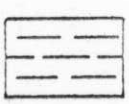

CONGLOMERATE

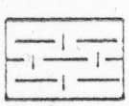

SANDSTONE

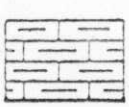

SILTSTONE

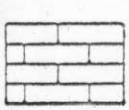

SILTY SHALE

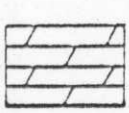

SANDY SHALE

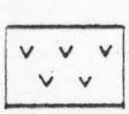

SHALE

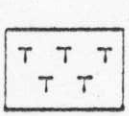

CALCAREOUS SHALE

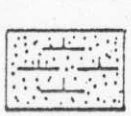

SHALEY LIMESTONE

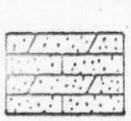

LIMESTONE

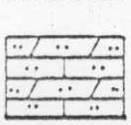

DOLOMITE

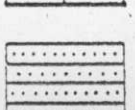

VOLCANICS


TUFF


CALCAREOUS SANDSTONE


SANDY CARBONATE


SILTY CARBONATE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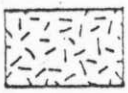
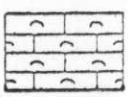

GRANITE


CARBONATE BRECCIA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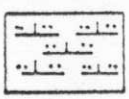
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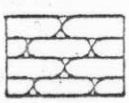
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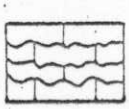
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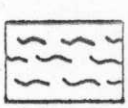
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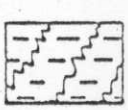
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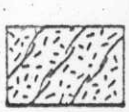
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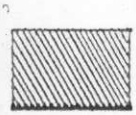
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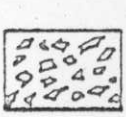
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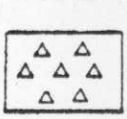
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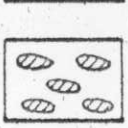
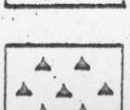
NODULAR CHERT


IRONSTONE NODULES


SEPTARIA NODULES


SILICEOUS

APPENDIX II

MINERAL CLAIMS

APPENDIX II

MINERAL CLAIMS

The claims that are the subject of this report are as follows:

N.T.S.	CLAIMS		GRANT NUMBER	RECORDING DATE	DUE DATE	NO. OF CLAIMS
105F-15, F-16	ANGIE	1-216	YA20427-YA20642	June 29, 1977	June 29, 1979	216
		219-314	YA20643-YA20738	June 29, 1977	June 29, 1979	96
		357-358F	YA20739-YA20740	June 29, 1977	June 29, 1979	2
		363-364F	YA20741-YA20742	June 29, 1977	June 29, 1979	2
		500-501F	YA20743-YA20744	June 29, 1977	June 29, 1979	2
		676-677F	YA20745-YA20746	June 29, 1977	June 29, 1979	2
						320

APPENDIX III

STATEMENT OF COSTS

APPENDIX III

STATEMENT OF COSTS
(For the Period July 1, 1978 to March 15, 1979)

TOTAL EXPENDITURES

Welcome North Mines Ltd. (N.P.L.) holds either by staking or under option 1,079 contiguous claims in what is termed the PMJ Trend (Fig. 1). Of these claims, located in N.T.S. 105F-15, 105K-2 and 105K-3, 320 lie within the Watson Lake Mining District and 759 within the Whitehorse Mining District.

Total expenditures for the Watson Lake Mining District block amounted to $183,956-30, which is subdivided into the cost centres as follows:

05	Assays and Geochemical Analysis	$ 11,160.21
10	Camp Maintenance	10,826.44
20	District Expense	2,924.13
25	Drilling	---
30	Field Equipment and Supplies	15,208.76
35	Fixed Wing	162.87
40	Fuel	5,359.06
45	Linecutting	22,750.00
70	Rotary Wing	39,794.22
75	Salaries & Wages	39,492.50
90	Geophysical Surveys	---
95	Other Surveys	---
100	Transportation and Miscellaneous	7,484.37
105	Trenching	14,803.05
120	Miscellaneous - Indirect	1,402.23
125	Overhead	12,588.46
		$183,956.30

Work in the form of drilling, trenching, etc. was performed on certain claims under codes 25, 45, 90, 95 and 105.

Total expenditures from above	$183,956.30
Total expenditures under 25, 45, 90, 95, 105	37,553.05
General Expenditures not allocatable to specific claims	$146,403.25

CERTIFICATE

I, H. Frank Foster, of 2568 Palmerston Avenue, West Vancouver, British Columbia, DO HEREBY CERTIFY:

1) That I am a geologist with a business office at 1027 - 470 Granville Street, Vancouver, B.C.
2) That I am a graduate in honours geology of the University of British Columbia (B.Sc. - 1974).
3) That I have practiced my profession as a geologist for the past five years.
4) That to the best of my knowledge and belief, the statement of costs presented in this report "RESULTS OF GEOCHEMICAL AND GEOLOGICAL SURVEYS AND TRENCHING ON THE SOUTH ANGIE GRID - ANGIE MINERAL CLAIMS" is both correct and true.
5) That I hold an interest in the shares of Welcome North Mines Ltd. (N.P.L.), and that I am employed by Welcome North Mines Ltd. (N.P.L.) as a staff geologist.

H. Frank Foster

Sworn before me at the City of Vancouver, in the Province of British Columbia, this 23rd day of April, 1979.

A Notary Public in and for the Province of British Columbia.

WELCOME NORTH MINES LTD. (N.P.L.)
1027 - 470 Granville St., Vancouver, B.C. V6C 1V5 Telephone (604) 687-1658

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I. Frank Foster, staff geologist, Welcome North Mines Ltd. (N.P.L.) of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the Statement of Costs presented in this report "RESULTS OF GEOCHEMICAL AND GEOLOGICAL SURVEYS AND TRENCHING ON THE SOUTH ANGIE GRID - ANGIE MINERAL CLAIMS" is both correct and true.

H.F. Foster

H.F. Foster

DATE: April 23 /79

SWORN BEFORE ME at the City of Vancouver, in the Province of British Columbia, this 23rd day of April, 1979.

A Notary Public in and for the Province of British Columbia.