

ONO - OYA CLAIMS.

GEOLOGY AND GEOCHEMICAL RESULTS.

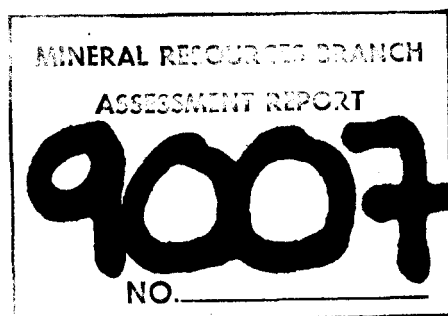
ATLIN MINING DIVISION.

104 K / 13 E

58° 46' N, 133° 40' W.

Owned by

ANGLO CANADIAN MINING CORPORATION.



Date: January, 1981.

JoAnne Nelson, MSc.,
Geologist.

STOKES EXPLORATION MANAGEMENT CO.LTD.,
713 - 744 West Hastings Street,
Vancouver, B.C. V6C 1A5.

TABLE OF CONTENTS.

	Page.
Introduction	1.
Location and Access	
Nature of claims	
Work summary	
Regional Geologic Environment	1.
Property Geology	2.
Lithologies	2.
Rhyolites	3.
Metamorphism	3.
Structure	3.
Mineralization	4.
Geochemical results.	5.
Summary and potential	6.
Recommendations	6.
References	9.
<u>List of Appendices.</u>	
Appendix 1 Certificates of Assay	7.
Appendix 2 Cost Statement	8.
Appendix 3 Author's qualifications	9.
Appendix 4 References	10.

LIST OF TABLES.

		Page.
Table 1.	Geochemical Results, Ono-Oya Claims.	7.
a)	Assay results, massive sulfides.	7.
b)	Geochemistry of rhyolites, in vicinity of claims.	
c)	Stream sediments, northern Oya claims.	7.
d)	Stream and soil samples, southern Ono claims along Shazah Creek.	7.

LIST OF FIGURES.

		Page.
Figure 1.	Location of Ono-Oya claims.	Back pocket.
Figure 2.	Detailed Geology - Ono-Oya claims.(1)	Back Pocket.
Figure 3.	Detailed Geology - Ono-Oya claims (2).	Back Pocket.
Figure 4.	Geology - Ono-Oya claims and vicinity.	Back Pocket.
Figure 5.	Structural Data, Ono-Oya claims and vicinity.	Back Pocket.
Figure 6.	Geochemical Samples, Ono-Oya claims.	Back Pocket.

* * * * *

INTRODUCTION.

The Ono-Oya claim blocks consist of 30 claim units staked on June 25 and 26, 1980 by JoAnne Nelson as agent for R.B.Stokes. They were recorded in Atlin on July 2, 1980. Ownership of the claims is to be transferred to Anglo Canadian Mining Corporation.

The claims lie on the western flank of Mt. Stapler and extend down into Shazah Creek Valley (Figure 1). They are located at 58°46'N, 133°40'W, in the Atlin Mining Division. The southern edge of the property is 5 km from the Tulsequah Chief Mine and 12 km from the Tulsequah airstrip. Access is by helicopter or by boat along the Tulsequah River.

Topography on the Oya claims includes a glacier, a rocky cirque with 95% exposure, and alpine meadows. The Ono claims are meadowy and wooded to the north with moderate exposure. The lowlands around Shazah Creek support forests and dense buckbrush.

Staking was prompted by 1) abundance of rhyolites in the Mt. Stapler area and 2) two massive sulfide discoveries on the property.

A total of 27 man-days were spent on the property in July and August of 1980. Reconnaissance mapping was followed by detailed mapping at 1:5000 scale on grids and air photos (Figures 2 and 3). Stream and soil sampling was done in areas of comparatively low outcrop. (23 samples).

REGIONAL GEOLOGICAL ENVIRONMENT.

The Ono-Oya claims are underlain by rocks of the Mt. Eaton Formation, a Paleozoic/Lower Triassic volcano-sedimentary belt that extends north-northwest from Mt. Ogden through Sittakanay Mt., Mt. Ericksen and Mt. Eaton (Payne, 1980). The Mt. Stapler area was previously mapped as part of the undifferentiated metamorphic belt of the Coast Crystalline Complex (Souther 1964); however in terms of lithologies, metamorphic grade, and deformational history, the rocks there belong in the Mt. Eaton Formation.

Andesite flows, breccias and tuffs dominate the Mt. Eaton Formation. Sediments - limestone, chert, siltstone, greywacke-siltstone rhythmites, and coarser (in some places limy) turbidity deposits - occur at intervals

within it. Most interesting, from an economic point of view, are sporadic occurrences of felsic flows and tuffs.

The absence of a regional stratigraphy and the abrupt "pinching out" of units are consistent with the interpretation of this assemblage as an andesitic-island accumulation with associated reefs, bay and slope sediments, and submarine flank deposits, punctuated by occasional rhyolitic volcanism (Payne 1979).

As such, it is a likely host for volcanogenic stratabound massive sulfides. Three major massive sulfide deposits - Ericksen-Asbhy, Big Bull, and Tulsequah Chief - and several lesser occurrences are known within the Mt. Eaton Formation. Two of these, Big Bull and Tulsequah Chief, have been working mines. All of them are in rhyolites.

PROPERTY GEOLOGY.

The Ono-Oya property is underlain by a varied assemblage of andesites, felsic volcanic rocks, and marine sediments (Fig.2,3). Prevalent bedding-parallel schistosity suggests isoclinal folding, although the only visible major structures are warps. Schists are fine grained and apparently in lower greenschist facies, like the Mt. Eaton Formation elsewhere.

Lithologies.

On Mt. Stapler the proportion of felsic volcanic rocks to andesites is greater than in any other part of the Mt. Eaton Formation. The felsic volcanic rocks, quartz-muscovite schists, quartz-muscovite-feldspar schists, quartz-muscovite-chlorite schists, and massive metarhyolites, along with stratigraphically related chert, occur intercalated with andesitic tuffs and derived sediments and limestone. Due to intense folding and lack of sedimentary indicators regarding tops of beds, restoration of exact stratigraphy was not possible in the time available. The rocks are divided into two packages, one dominated by andesitic sediments and tuffs with prominent limestone intervals, and the other dominated by felsic volcanic rocks and mixed volcanic-cherty-carbonate sediments. (Fig. 4)

Mineralization occurs in both packages.

Rhyolites.

Southwest of the glacier in the Oya claim block, metamorphosed rhyolites are mostly pale green to white, well-laminated and foliated quartz-muscovite schists. Pyrite lenses up to 2 cm thick and 2 m long are abundant at intervals in the rhyolites. The lenses parallel bedding and are similar to those seen in rhyolites at Big Bull and Tulsequah Chief mines. Massive, unfoliated rhyolite is subordinate in this area.

In the southern part of the property, massive rhyolite and dacite predominate. Most outcrops are flows (?) with scattered hypabyssal intrusions; welded tuffs are also present. One ridge immediately above Shazah Creek consists of a coarse breccia composed of angular to sub-rounded fragments of massive to banded rhyolite and hypabyssal intrusive rocks in a sparse, in part pyritic matrix. Along strike to the east and north of these rhyolites is a bedded chert unit up to 500 m thick. It may be of exhalite origin.

In general, the rhyolites themselves do not show base metal concentrations. One small rhyolite north of the property is anomalous in zinc (238 ppm - Table 1b).

Metamorphism.

Textures in the Mt. Stapler schists are similar to those elsewhere in the Paleozoic-Lower Triassic rocks. They are fine grained with a pronounced planar and/or linear fabric. Minerals observed include quartz, muscovite, chlorite, feldspars, and calcite. Slightly coarser grain sizes seen in places may reflect a minor upgrading, but the prevailing grade remains lower greenschist. Gneissic textures, such as are prominent in the Tulsequah Gneiss, are absent.

Structure.

The Mt. Stapler schists have a single, bedding-parallel schistosity. Isoclinal minor folds are especially well-developed in limestones. The schistosity is steeply dipping in general. It warps, following bedding from NNW in the northern part of the property to NNE in the south. Figure 5 illustrates the scatter of foliation measurements in the area.

Lineations and minor fold axes (except for kinks) were divided into three groups (see Figure 5) as follows:

L₂. These later lineations plunge gently to the NNW. They are especially well-developed at the NW corner of the Oya claim block. Many of the rocks there are Letectonites, strongly lineated but with planar structures weak and variable to lacking. Streaky mineral lineations parallel minor fold axes. These folds have upright axial planes (Figure 6). On Figure 5, L₂ linear features form a distinct cluster.

L₁. Steeply-plunging NW and SE minor fold axes are prevalent in the interbedded limestones and andesitic sediments in the central part of the Oya claims. The folds are very tight to isoclinal (Figure 6). The axes form a weak girdle on Figure 5, which also includes the L₁ lineations. Geomtrically, this is interpreted as a set of earlier lineations that were deformed in the episode that produced L₂.

Late kinks show two weak clusters on Figure 5, trending SE and NE. Their attitudes are highly variable.

Mineralization.

The property contains three zones with significant sulfides.

1. Immediately below the glacier (Figure 2), a thick limestone unit contains sphalerite-galena-pyrite-arsenopyrite-chert lenses up to 20 cm wide and 10 to 15 m long, parallel to bedding. Assays of two samples from this massive sulfide are shown in Table 1 (a). They contain 64.19 and 55.05 oz/ton Ag, and .61 and .70 oz/ton Au respectively. Near the massive sulfides are several breccia lenses 30 m. long, consisting of angular limestone clasts surrounded and partly replaced by pyrite-sphalerite-galena matrix. The breccias are probably the result of sulfide remobilization during deformation. Just west of the showing the limestone is seamed with a stockwork of fine native sulfur veins and scattered larger copper-stained chert veins. These may represent the feeder system for a surface sulfide accumulation.

2. A massive sulfide zone 30 cm wide occurs in banded and brecciated rhyolite in a small outcrop on Shazah Creek. (Figure 3). The sulfide is pyrrhotite with scattered patches of chalcopyrite (Table 1 a)

3. The occurrence of primary pyrite in the rhyolites as described above, although not economic, is an encouraging environmental indicator.

GEOCHEMICAL RESULTS.

Sediment samples were taken from streams in the cirque which drains the northern part of the Oya claims (Figure 6 and Table 1(c)). A few of them are anomalous in silver. Zinc anomalies are also noted. Fourteen soil and stream samples were taken along the NW bank of Shazah Creek (Figure 3 and Table 1(d)). Many of these, both above and below the known sulfide showing, are anomalous in silver and base metals. Silver averages 1.54 ppm, with a high of 3.4 ppm. One sample contains 700 ppm zinc. Copper averages 190 ppm, with a high of 980 ppm.

SUMMARY AND POTENTIAL.

The Ono-Oya property lies in a Paleozoic-Lower Triassic volcano-sedimentary belt which hosts three known volcanogenic massive sulfide deposits, Ericksen Ashby, Big Bull and Tulsequah Chief, each of which is spatially and genetically associated with small rhyolite units. The preponderance of felsic volcanic rocks on the Ono-Oya claims recommends the area as a likely environment for volcanogenic sulfides.

The small sulfide occurrences on the property support this idea. One of them contains high silver values, about 60 oz. ton, and high gold values, about 0.65 oz/ton.

The presence of coarse rhyolite breccias and minor massive sulfides in the southern part of the property suggest that a volcanic center may lie under alluvium in Shazah Creek Valley. Favorable stream sediment and soil geochemical results from this area further indicate the possibility of unexposed sulfide bodies.

RECOMMENDATIONS.

Further exploration should center in the Shazah Creek area for which an accurate map at 1:5000 scale or larger should be produced from enlarged air photos. Trenching around the small showing on the creek wall could enlarge its extent and define its trend. Additional geochemical sampling is also warranted. Geophysical surveys over the alluvium-covered parts of the valley would be useful; anomalies could provide possible drill targets.

Ideally work should be done in the spring or early summer before alder and devil's club grow dense enough to obstruct travel in the lowlands.

TABLE 1 : GEOCHEMICAL RESULTS, ONO-OYA CLAIMS

a) Assay results, massive sulfides

Sample location	Au(oz/ton)	Ag(oz/ton)	Cu%	Pb%	Zn%	As%
(1)	.61	64.19	.16	16.60	11.65	7.10
(1)	.70	55.05	.13	13.60	9.85	4.95
(2)	.002	.04	.24	.01	.01	-

b) Geochemistry of rhyolites in vicinity of claims

Sample location	Cu(ppm)	Pb(ppm)	Zn(ppm)	Ag(ppm)
4009	8	7	80	.6
4010	4	29	62	.4
4011	.9	5	238	.3

c) Stream sediments, northern Oya claims

Sample location	Cu(ppm)	Pb(ppm)	Zn(ppm)	Ag(ppm)
3954	76	6	32	.6
3955	33	12	80	.6
3956	33	20	98	.8
3957	38	57	186	1.4
3958	20	12	105	.5
3959	14	14	66	.6
3960	20	36	102	1.1
3961	21	14	71	.4
3962	18	20	100	.6

d) Stream and soil samples, southern Ono claims along Shazah Creek

Sample location	Cu(ppm)	Pb(ppm)	Zn(ppm)	Ag(ppm)
8251	63	16	26	1.1
8252	19	16	68	.4
8253	20	34	50	1.2
8254	167	26	700	.8
8255	105	13	34	1.2
8256	55	24	41	1.5
8257	252	46	49	3.4
8258	980	36	132	3.1
8259	177	18	84	.5
8260	136	8	37	1.7
8261	79	13	60	2.2
8262	192	14	49	2.4
8263	166	10	17	1.9
8264	244	7	40	.2

COST STATEMENT.ONO-OYA CLAIMS.Geological mapping and geochemical sampling.

J. Nelson, 26 - 29 July, 1 - 6 August 10 man-days @ \$200/day	\$ 2,000.00
J. Payne, 26,27,30 July; 1-4,6 August, 8 man-days @ \$300/day	2,400.00
G. Gossan, 27-30 July; 4,5 August, 5 man-days @ \$200/day	1,000.00
L. Miller, 1 August, 1 man-day @ \$75.60/day	75.60
E. McCrossan, 1,3,6 August,3 man days @ \$84.00/day	252.00
Helicopter support, 13 hrs. @ \$335	4,355.00
Camp support, 27 man-day @ \$48 (See above for specific dates)	996.00
Geochemical analyses, 26 samples @ \$5.00	130.00
	<hr/>
Total:	<u>\$11,208.60</u>

C E R T I F I C A T E .

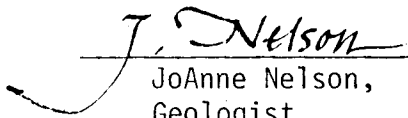
I, JoAnne Nelson, do hereby certify:

That I am a geologist residing at
4027 West 18th Avenue, Vancouver,
British Columbia, V6B 2T2.

That I hold a B.Sc in geology from
the University of Washington (1973)
and an M.Sc in geology from the
University of British Columbia (1976).

That I have no financial interest, either
direct or indirect, in the subject property
and that I do not expect to obtain any such
interest.

That the information contained in this
report is based on my personal knowledge
of the general area, reference to the
works cited in this report, and to
examination of the property in question.



JoAnne Nelson,
Geologist.

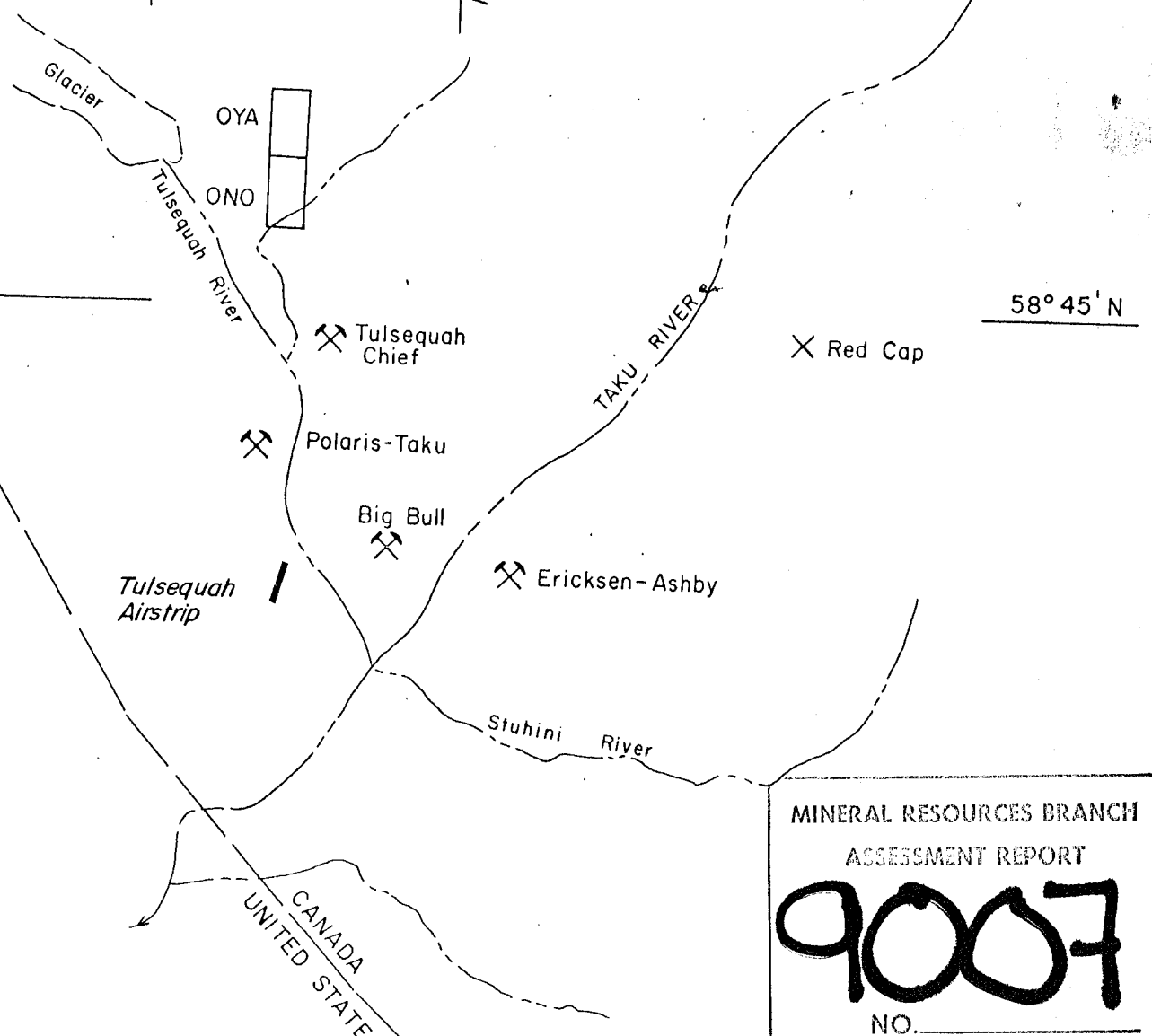
REFERENCES.

- PAYNE, J. G. 1979 - Ericksen-Ashby claims.
Geology Report. Private
report for Stokes Exploration
Management Co.Ltd.
- PAYNE, J. G. 1980 - Taku-Tulsequah Regional
Geology and Mineral
Deposits. Private report
for Anglo Canadian Mining
Corporation.
- SOUTHER, J. G. 1971 - Geology and Mineral
Deposits of the Tulsequah
Map area, British Columbia.
Geology Survey of Canada
Memoir 362.



133° 30' W

58° 45' N



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9007
NO. _____



scale in kilometers

STOKES EXPLORATION MANAGEMENT CO LTD.	
LOCATION of ONO / OYA CLAIMS	
DATE : DEC, 1980	FIGURE NO : 1
GEOLOGY BY :	DRAWN BY : EDCO LTD.

LEGEND

Late Dikes

F	felsite
Ø	porphyritic
∇	quartz phenocrysts
P	plagioclase
H	hornblende
D	dacite
A	andesite

MT. EATON FORMATION

VOLCANIC ROCKS

A	andesite	AD	dacitic andesite
D	dacite	DA	andesitic dacite
R	rhyolite	RD, DR	rhyodacite

subscripts

t	tuff
s	sediment
f	flow
L	limy
x	breccia
w	welded
py	pyritic

SEDIMENTARY ROCKS

L	limestone	Lc	cherty limestone
C	chert	Lc	limy chert
m	mudstone		
s	siltstone		

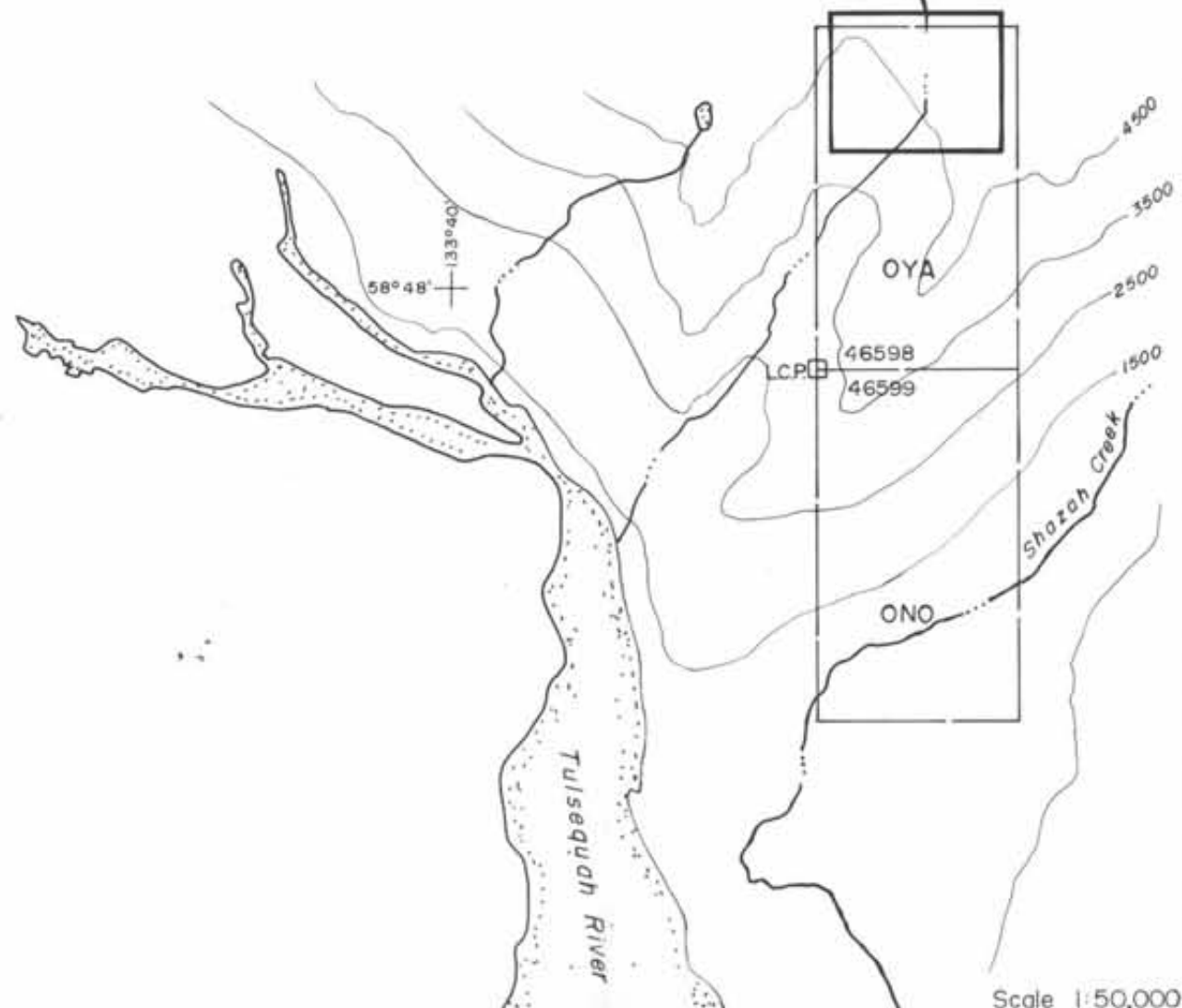
(?) outcrop located but not examined

M.S. massive sulfide

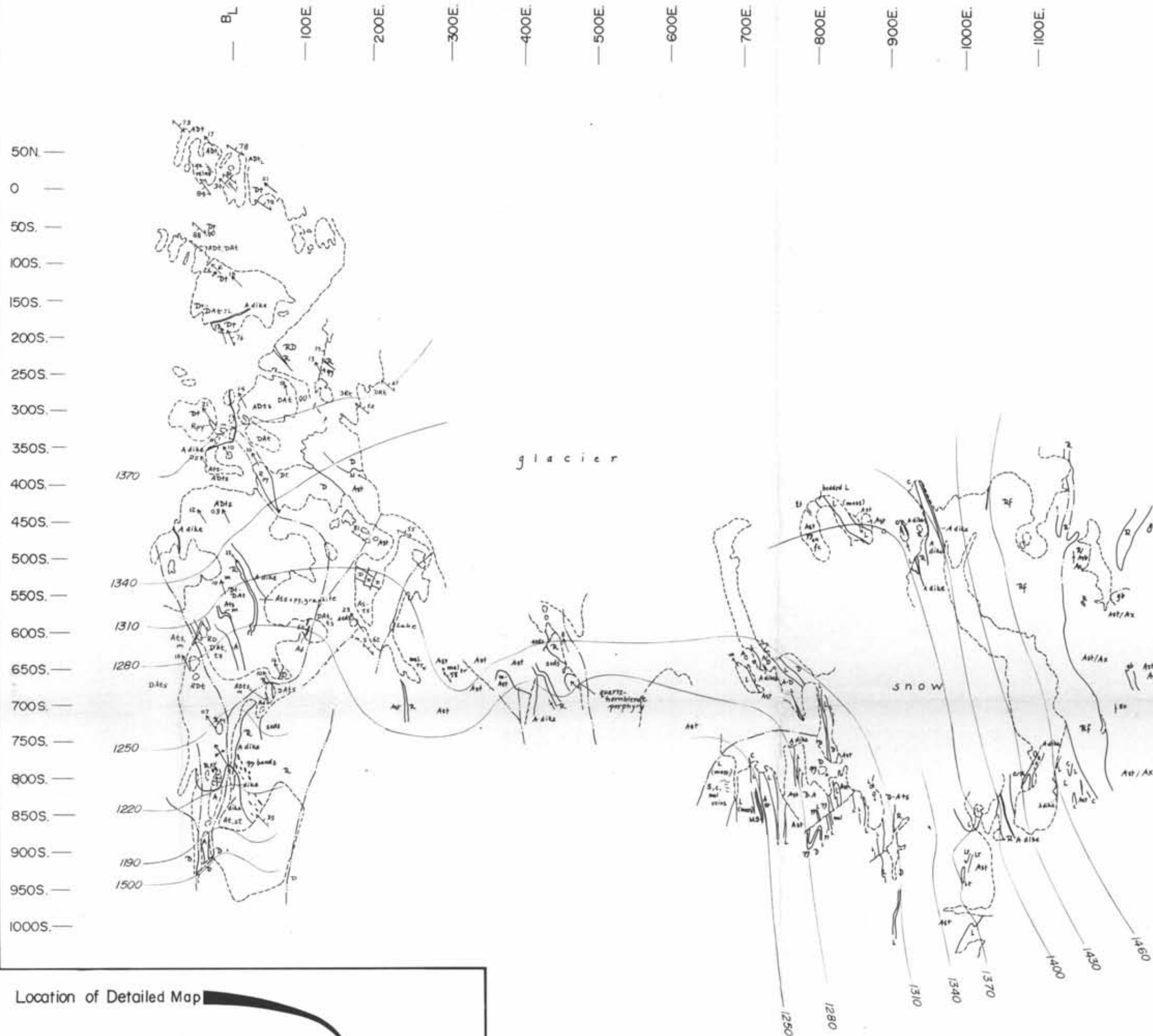
SYMBOLS

○	outcrop border
---	Contact: defined assumed
~	fault
—	bedding
→	foliation: flow, metamorphic
→	lineation
↔	fold
—	edge of forest - buckbrush
—	stream
LK	lake
△	geochem sample: soil, rock

Location of Detailed Map



Scale 1:50,000



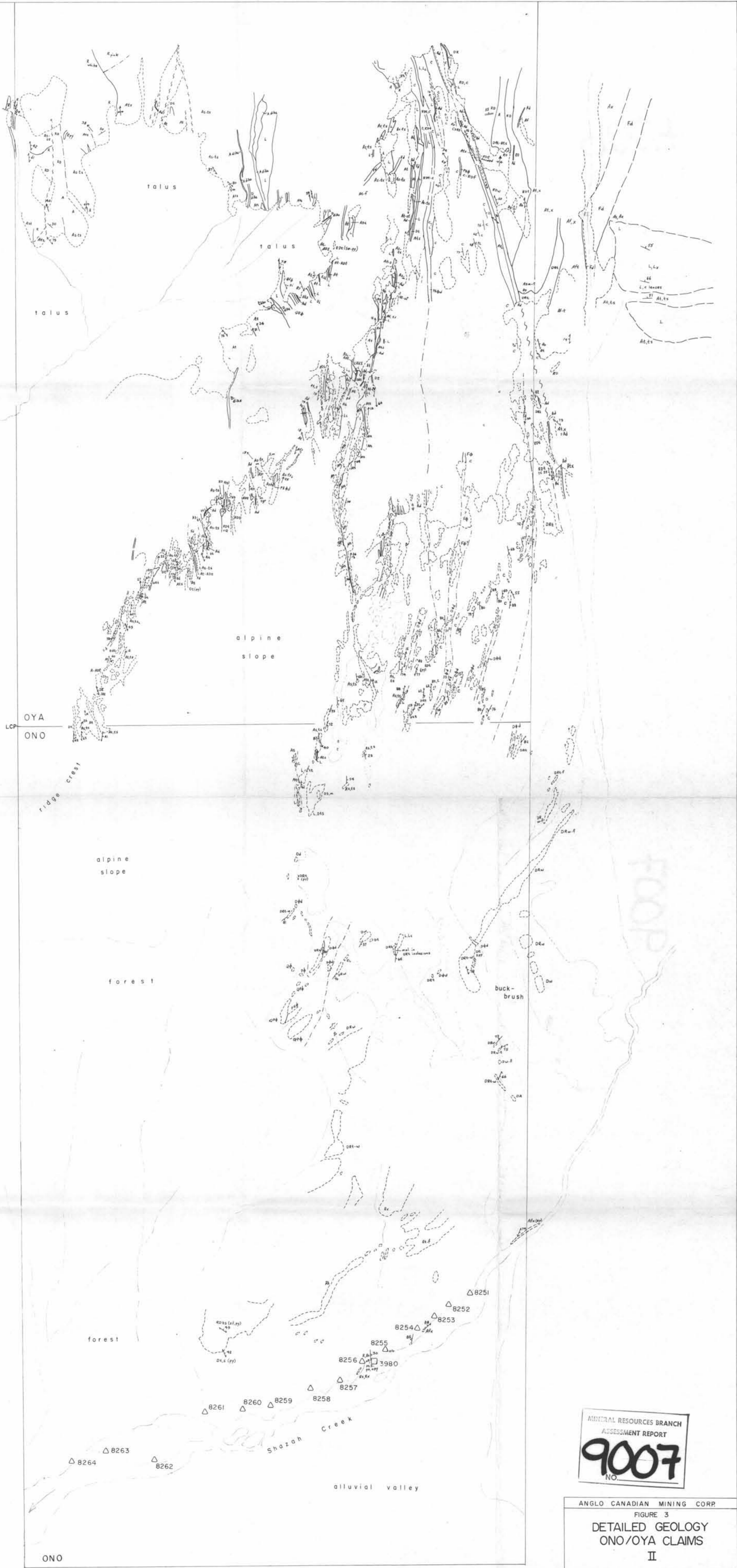
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9007
NO.

1:5,000 0 5 10 20 30 40m

STOKES EXPLORATION MANAGEMENT CO. LTD.

DETAILED GEOLOGY ONO / OYA CLAIMS I

DATE: DEC. 1980 FIGURE: 2
GEOLOGY BY: J. NELSON M.Sc. J. PAYNE Ph.D. DRAWN BY: EDCO LTD.



LEGEND

Late Dikes

- F felsite
- Ø porphyritic
- Q quartz phenocrysts
- P plagioclase
- H hornblende
- D dacite
- A andesite

MT. EATON FORMATION

VOLCANIC ROCKS

- A andesite AD dacitic andesite
 - D dacite DA andesitic dacite
 - R rhyolite RD, DR rhyodacite
- subscripts
- t tuff
 - s sediment
 - f flow
 - L limy
 - x breccia
 - w welded
 - py pyritic

SEDIMENTARY ROCKS

- L limestone Lc cherty limestone
- C chert Cl limy chert
- m mudstone
- s siltstone

(?) outcrop located but not examined

M.S. massive sulfide

SYMBOLS

- outcrop border
- contact: defined assumed
- fault
- bedding
- foliation: flow, metamorphic
- lineation
- fold
- edge of forest - buckbrush
- stream
- LK lake
- △ 8256 geochem sample: soil, rock

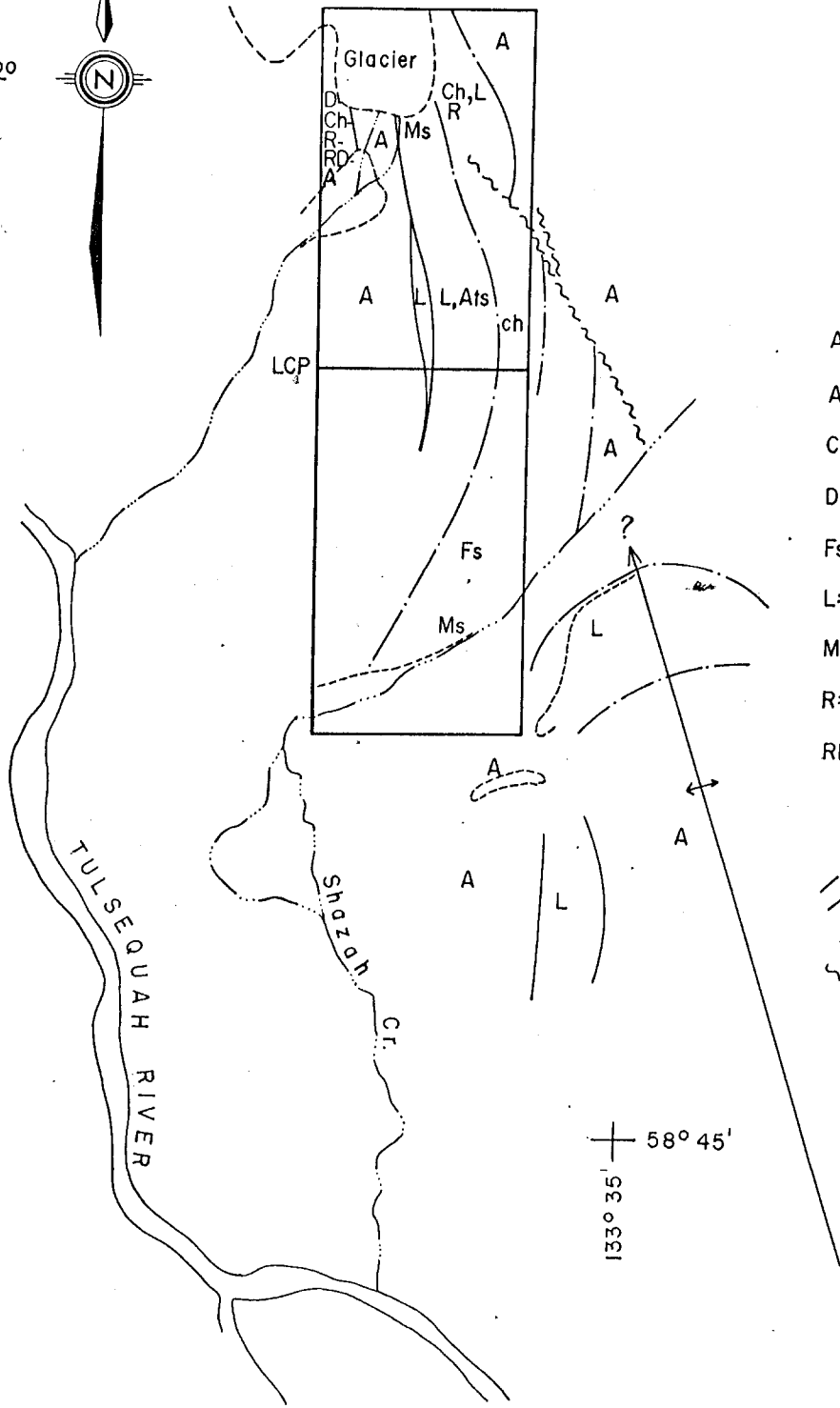
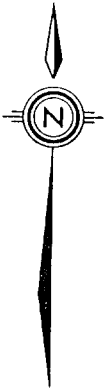
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9007
NO.

ANGLO CANADIAN MINING CORP.
FIGURE 3
**DETAILED GEOLOGY
ONO/OYA CLAIMS
II**
- approximate scale 1:5500
J. PAYNE, J. NELSON DECEMBER 1980

6,520,000

580,000

6,520,000



LEGEND

- A: andesite
- Ats: andesitic tuffs - andesitic sediments
- Ch: chert
- D: dacite
- Fs: felsites (rhyolite, rhyodacite, dacite)
- L: limestone
- Ms: massive sulfide
- R: rhyolite
- RD rhyodacite
- anticlinal axis
- contact: approx, defined.
- outcrop limit
- fault

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

9007
NO.

6,510,000

SCALE 1:50,000



STOKES EXPLORATION MANAGEMENT CO. LTD.

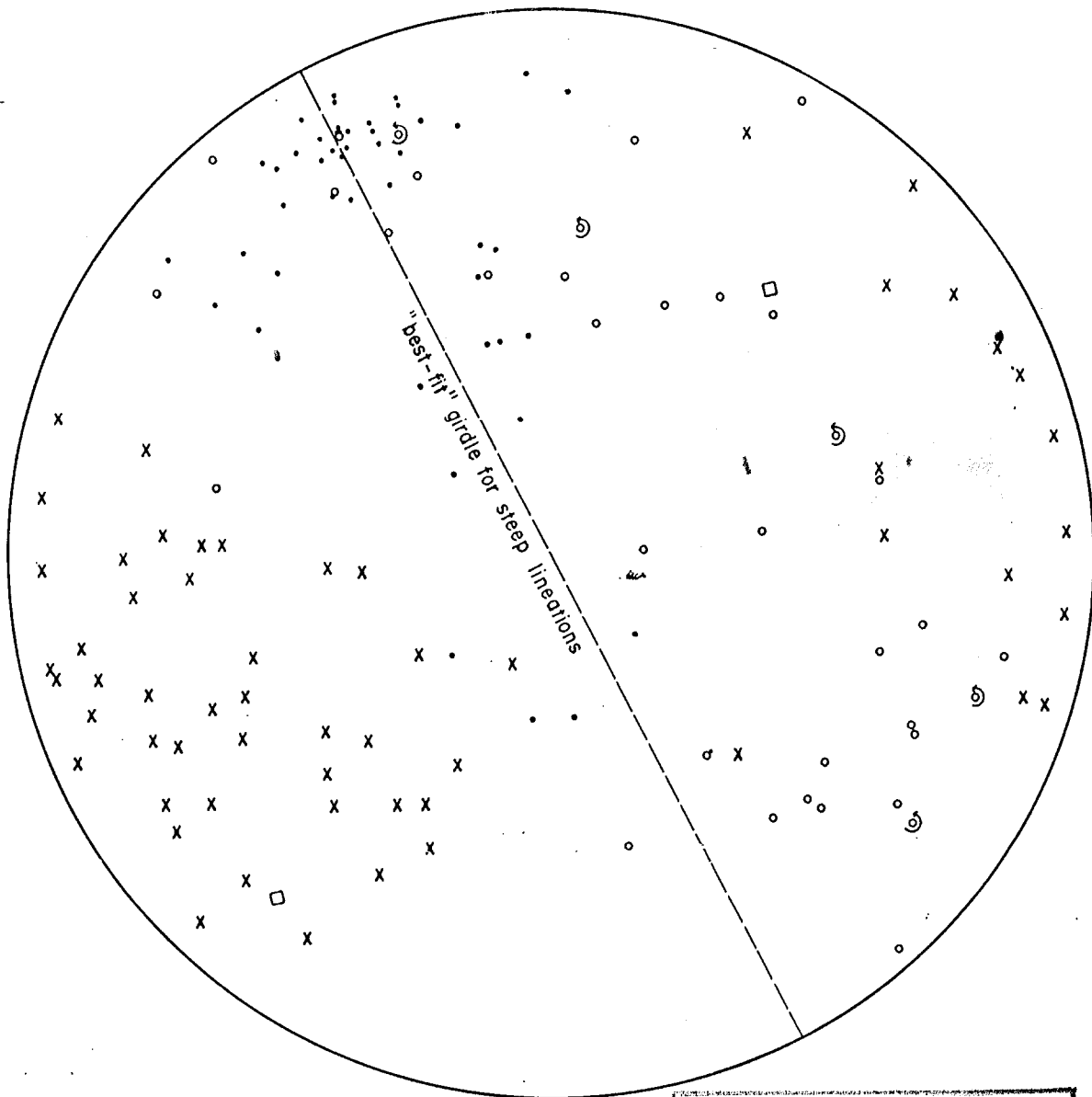
GEOLOGY
ONO-OYA CLAIMS AND VICINITY

DATE: NOV., 1980

FIGURE NO: 4

GEOLOGY BY: J. NELSON

DRAWN BY: EDCO LTD.



LEGEND

- Lineations
- Kink axes
- x Poles to foliation and bedding
- Poles to axial planes of folds
- ⊕ Vergence

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

9007
NO.

STOKES EXPLORATION MANAGEMENT CO. LTD.

STRUCTURAL DATA
ONO-OYA CLAIMS AND VICINITY

DATE: NOV. 1980

FIGURE NO. 5

PLOTTED BY J. NELSON

DRAWN BY: EDCO LTD.