TRANS YUKON EXPLORATION LTD.

Oxo Group

Watson Lake M.D. 105-F-9

Yukon Territory

REPORT

BY

P. H. SEVENSMA, Ph.D., P. Eng.

February 29, 1968

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ILLUSTRATIONS

EM by S. Presunka, Geology by W.B. Montgomery, P.Eng.

1. INTRODUCTION

Trans Yukon Exploration Ltd. (N.P.L.) of Box 1979 Whitehorse, Y.T. have recently acquired the Oxo group of claims in the Ketza River area, Watson Lake Mining Division, in the Yukon Territory. (Fig. 1)

The claims are located in a belt now under active investigation for silver on various properties, notably on the adjacent Silver Key - Stump Mines properties where an underground program of exploration is about to be carried out.

The writer has had the opportunity, a number of years ago, to examine the ground now covered by the most Northerly claims and is also acquainted through personal inspection with the silver-bearing showings on the Silver Key - Stump Mines ground, and with the gold-bearing massive sulphides in the upper reaches of Cache Creek, covered by the Peel, Fury and Penguin claims.

The Oxo claims cover occurrences in place of lead-zinc-copper, float occurrences of high grade silver and an electromagnetic anomaly of a type that has a high probability of association with a high-sulphide body.

All these various features lie near or along a contact of Cambrian limestones and quartzites with phyllites which contact is the usual locus of many silver-lead-zinc-copper occurrences in Northern B.C. and the Yukon.

Recent geological work in the Ross River area has strongly suggested that the large Vangorda Creek ore-bodies are also associated with rocks of Cambrian age, contrary to the previously held belief that these rocks were of Mississippian-Devonian age.

Introduction Cont'd

The writer considers that the features present in the Oxo group of claims constitute a prime exploration target with a high probability of success.

References used by the writer are as follows:

1. Assay-data of P. Versluce on samples taken by Conwest and by Dr. A. Aho for B Y Explo. in August - September, 1955.
2. The Oxo Group lead-silver-copper prospect by W. B. Montgomery, P.Eng. August 17, 1963.
3. Oxo Group, by Dr. L. H. Green, in Paper 65-19, The Mineral Industry of Y.T. and SW District of MacKenzie, 1965.
4. Electro-magnetic survey by S. Presunka, August 1966.
5. The Oxo Group, by Ace R. Parker, December 12, 1966.
6. Report of Activities, Part A, May to October 1967. G.S.C. Paper 68-1, pp 43-52, by D. J. Templeman-Kluit.
7. Field notes and reports by the writer and by others on various properties in the area shown on Figure 2.
8. Geology map G.S.C., Map 7-1960, Quiet Lake area.
9. Aeromagnetic map 7005G, 1963 - 1" = 4 miles.

2. PROPERTY, LOCATION AND ACCESS

The property consists of the following claims:

Claim No.	Grant No.
Oxo 1-2	75623 - 75629
Oxo 3-5	75632 - 75634
Oxo 6-7	75630 - 75631
Oxo 8-9	75635 - 75636
Oxo 10-25	89163 - 89178
Oxo 26	71273
Moon 1 - 4	Y 16629 - Y 16632

The claims are located on claim sheet 105-F-9, Lat. 61°31'N, Long. 132° 13'W at elevations from about 4400' to 5600' along a tributary of Cache Creek. Expiry dates have not been checked by the writer.

The claim area is now relatively easily accessible by a 35 mile truck road starting some 8 miles SE of the crossing of the Canol Road and the Carmacks - Watson Lake highway. (Figure 2)

Ross River, the nearest supply centre, lies about 220 road miles from either Whitehorse or Watson Lake.

The area is one of average snowfall, with about 3' - 4' of packed snow at the end of the winter.

There is little timber on the property, but good timber is present in the Ketza Valley.

The property lies along a small creek; there is fair to abundant water as the streams are followed to the Ketza River.

The writer has not inspected the location of the claims in the field, but various authors refer to a number of the claimposts in their descriptions. No search of title has been made by the writer.

3. HISTORY

Lead-silver was first reported in the Ketza River area in 1948 by prospectors working for Hudson Bay Mining & Smelting. A high grade discovery made in 1954 led to the first staking rush in the area.

In the next 13 years, the area was gradually prospected and explored; a number of new discoveries were made, including the Oxo, Conwest trenched and drilled several showings and Ketza Key Mines, later Silver Key Mines and Stump Mines, constructed and improved a tote-road to the point where Cache Creek is now relatively easily accessible with a four-wheel drive vehicle.

Underground work is being undertaken some 2 miles East of the Oxo Group on the Stump Mines - Silver Key ground.

The area as a whole has numerous showings, but development has previously been held back by problems of access. After the recent improvement of the Ross River road, the construction of the Watson Lake road and the discovery of the major Faro deposit, access to the general area has improved and it is expected that several economic deposits will be developed in the Ketza River area.

4. GEOLOGY

Silver showings in the general area occur mostly in or near a Cambrian limestone-phyllite contact or near hornblende-syenite bodies quite unique to the area.

A number of these showings are stratigraphically controlled by the Cambrian limestone-phyllite contact, some are located in shears in the limestone and some of the smaller mineralized shears occur in or near the Mississippian Sylvester volcanics and occasionally in the hornblende syenites.

A number of strong faults and shears affect the Cache Creek area where the Oxo Group is located.

In Cache Creek, large bodies of massive pyrrhotite with minor arsenopyrite occur North and Northwest of the Oxo Group; in places, packsack drilling has shown grades of about 0.2 - 0.3 oz/T Au (Fig.3).

These sulphide bodies extend over a length of some 4000' to 5000', but they have not been extensively explored.

The Stump Mine - Silver Key showing consists of a lead-silver bearing shear discovered as a result of geochemical work followed by trenching. Its exposed length is of some 800' and its width about 4' with an average grade of 24.9 oz/T Ag and 22.2% Pb, i.e. a ratio of about 1:1 for Ag:Pb; potential length is considerably greater.

Some showings in the area assay as low as a 1:2 ratio of Ag:Pb, whereas others reveal grades of 200 - 500 oz/T Ag.

Geology Cont'd

Ratios of 1:1 are the most prevalent.

As a result of the work by D. J. Tempelman Kluit in the Vangorda Creek area, the major base-metal bearing sulphide bodies in that district are now believed to be of Middle Cambrian age.

Previously, most other silver-lead-zinc-(copper) occurrences in B. C. And in the Eastern Yukon had been found in similar Cambrian strata.

These Cambrian formations have now been demonstrated to contain large economic sulphide bodies in the Yukon, and a general reappraisal of showings along the favorable Cambrian limestone-phyllite contact is fully justified.

The Oxo Group covers part of this favorable contact and shows considerable evidence of mineralization.

The Cache Creek area is of special interest in view of the prevailing silver-lead ratios, and the various prospects in this area are all potential silver producers.

5. GEOLOGY - OXO GROUP

The Oxo Group straddles the limestone-phyllite contact.

The most prominent features are as follows:

A. A quartzose zone some 800' long and up to possibly 200'wide, trending SSW - NNE, is approximately centered on the posts identifying claims Oxo 1, 2, 3 and 26.

Geology - Oxo Group Cont'd

This zone is intermittently exposed and terminates to the North East in a zone of pyrrhotite-galena about 12' wide and some 90' long as exposed.

Some typical samples taken by various examining engineers are as follows:

	Au	Ag	Pb	Width
A. Aho	.02	10.5	12.1	9'
A. Aho	.02	9.5	11.3	4'
W. Montgomery	.02	8.75	9.73	2½'
W. Montgomery	.01	5.60	12.47	12'
A. Parker	tr.	8.4	5.7	15'
Average	.01	8.5	10.3	(arithmetic)

There is only a trace of zinc and minor copper of the order of 0.1%.

B. High grade silver float with grey copper assaying 331.9 Ag.

C. Other lead-zinc-copper showings not accurately tied in to adequate markers, in the Northern part of the claims.

D. A zone discovered in 1967 while road building was in progress and said to carry massive pyrrhotite and chalcopyrite over a length of some 100'. No reliable assays are available to the writer.

E. A Ronka Mark IV electromagnetic anomaly lying along the East side of the quartzone zone A. and located by S. Presunka in 1966.

Near the SE end of this conductor, high grade silver float up to 300 oz/T Ag has been reported (See Fig. 4).

This anomaly indicates conducting material at shallow depth, i.e. less than about 100'.

The shape of the EM profiles, measured with a 200' cable, is very suggestive of sulfides because the profiles are regular, show strong in-phase and weak out-of-phase measurements with ratios of in-phase to out-of-phase varying from 9 down to 2.

The profiles suggest a conductor with a steep dip to the East and a maximum width of about 250' on three lines about 350' apart.

The high ratios are very significant in the presence of a smooth profile; this combination is very suggestive of the presence of a body with some 50 - 100% sulphides. Lying along a sulphide-carrying quartzose body and along the favorable limestone-phyllite contact, and also supported by some high-grade silver float, this conducting zone is considered a prime exploration target with a high probability of success.

F. An unusual amount of chalcopyrite float is also reported on these claims by responsible observers.

Chalcopyrite is found in place in narrow NW trending shears along the SE border of the quartzose zone.

All these various features, lying along or close to the favorable contact, indicate a well-mineralized area in which much more detailed exploration is fully justified, as there is a well above average probability of success.

6. PROPOSED PROGRAM

It is certain that at least one good drill target is available on this property.

However, a number of other situations require field-work to determine which ones warrant investigation by drilling.

It is therefore proposed to establish a camp near the creek on the North half of the property and, in a first stage to carry out all necessary mapping, soil sampling and additional EM surveying over areas previously not covered, using the existing showings as starting point.

After completion of the field evaluation, it is recommended that drilling be commenced on the most promising target, for which a minimum 2000' of core drilling is expected to be required.

If encouragement is encountered in these first two stages, a third stage will require continued drilling, preceded very likely by more extensive access-road building.

During this third contingent stage, a decision as to the extent of further work can be taken.

8. SUMMARY

The 30 claim Oxo Group lies along the favorable Cambrian limestone-phyllite contact in an area with much evidence of possible economic silver deposits.

The claims cover various mineral showings which have not yet been assessed in detail. In addition, a pronounced electromagnetic anomaly lies along a wide quartzose zone, which may be a zone of silification and which is associated with spotty silver-lead and some copper mineralization.

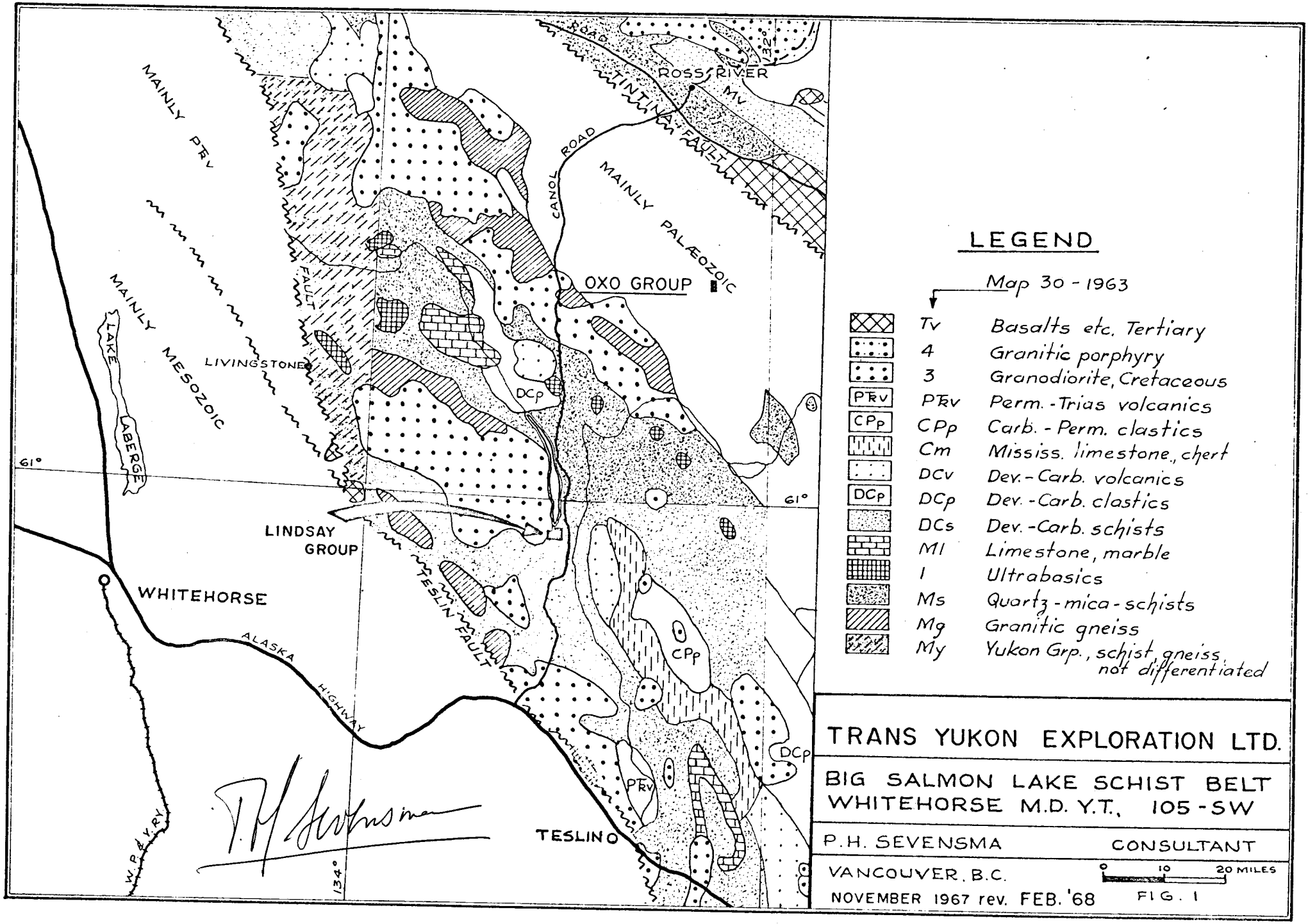
Both the favorable geological setting of the conducting body and the electrical characteristics of the associated electromagnetic anomaly indicate a high probability that this zone is one with a high sulphide content; nearby showings and float suggest the presence of significant silver. A two-stage firm program for a total of $69,000.00 is recommended to be followed, in case of initial success, by more extensive road building and drilling, estimated to cost $78,000.00, for a total budget of $147,000.00.

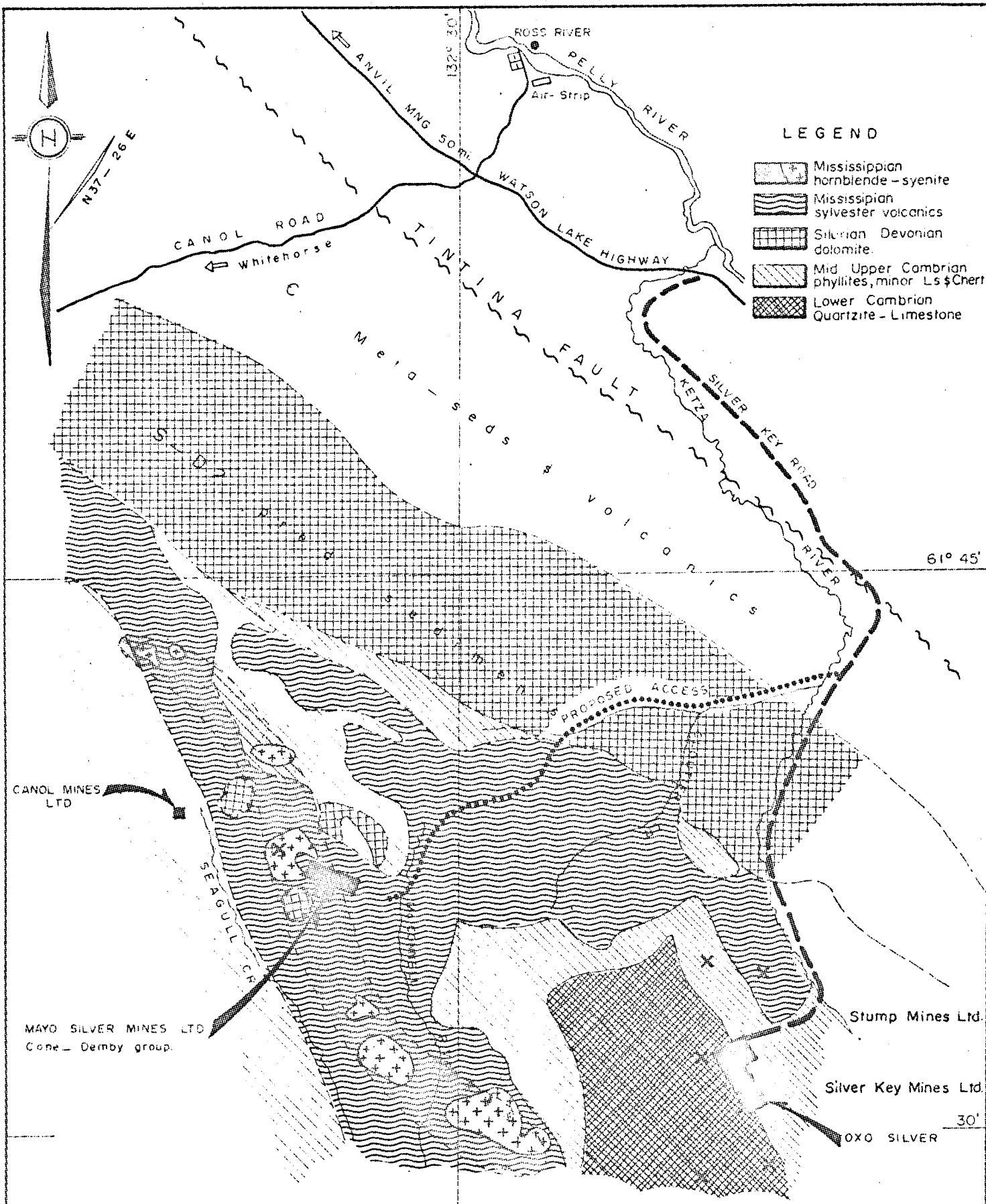
Respectfully submitted,

P. H. Sevensma, Ph.D., P. Eng.

PHS/cm

Vancouver, B.C.
February 29, 1968.


ROSS RIVER
ROAD
TINTINA FAULT
CANOL ROAD
MAINLY PALÆOZOIC
MAINLY PTRv
FAULT
OXO GROUP
MAINLY MESOZOIC
LAKE LABERGE
LIVINGSTONE
DCp
61°
LINDSAY GROUP
WHITEHORSE
TESLIN FAULT
ALASKA HIGHWAY
CPp
PTRv
DCp
TESLIN
134°
LEGEND
Map 30 - 1963
Tv Basalts etc. Tertiary
4 Granitic porphyry
3 Granodiorite, Cretaceous
PTRv Perm.-Trias volcanics
CPp Carb.-Perm. clastics
Cm Mississ. limestone, chert
DCv Dev.-Carb. volcanics
DCp Dev.-Carb. clastics
DCs Dev.-Carb. schists
Ml Limestone, marble
I Ultrabasics
Ms Quartz-mica-schists
Mg Granitic gneiss
My Yukon Grp., schist, gneiss, not differentiated
TRANS YUKON EXPLORATION LTD.
BIG SALMON LAKE SCHIST BELT
WHITEHORSE M.D. Y.T., 105-SW
P.H. SEVENSMA CONSULTANT
VANCOUVER, B.C.
0 10 20 MILES
NOVEMBER 1967 rev. FEB. '68
FIG. 1



Ref. G.S.C. Map 7–1960

× Mineral occurrences noted by the Geological Survey

P. H. Sevensma

FIG. 2

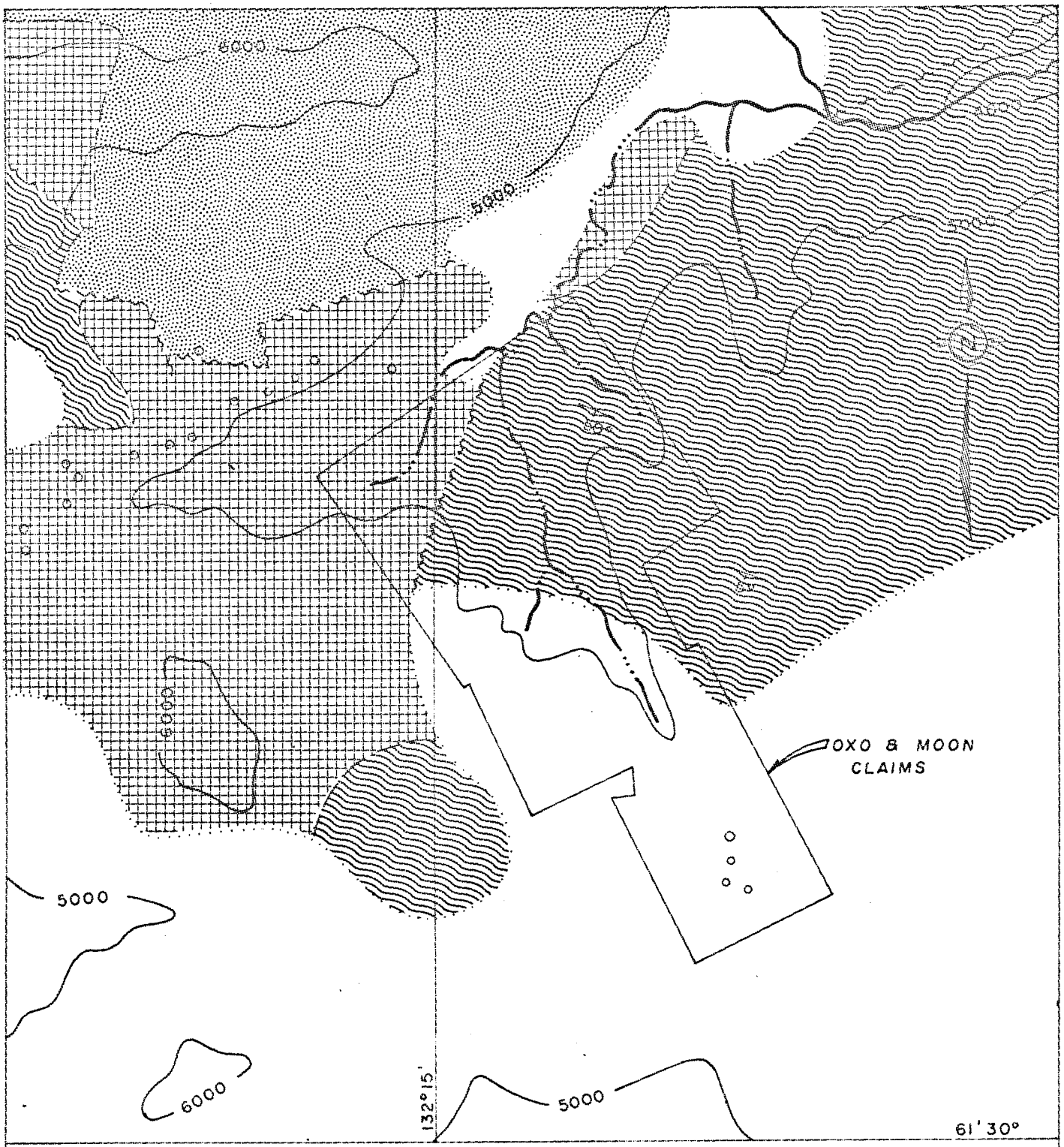
OXO Grp.– TRANS YUKON EXPL. Ltd.

PROPERTY LOCATION and REGIONAL GEOLOGY

Watson Lake M.D.

P. H. Sevensma Consultants Ltd. — Vancouver B.C.

February 1968 105–F–10/9 SCALE 0 4 mile



LEGEND

CAMBRIAN:

limey phyllite

massive limestone

Mt. FURY:

chert, fb. qtzite

Mineral Showings

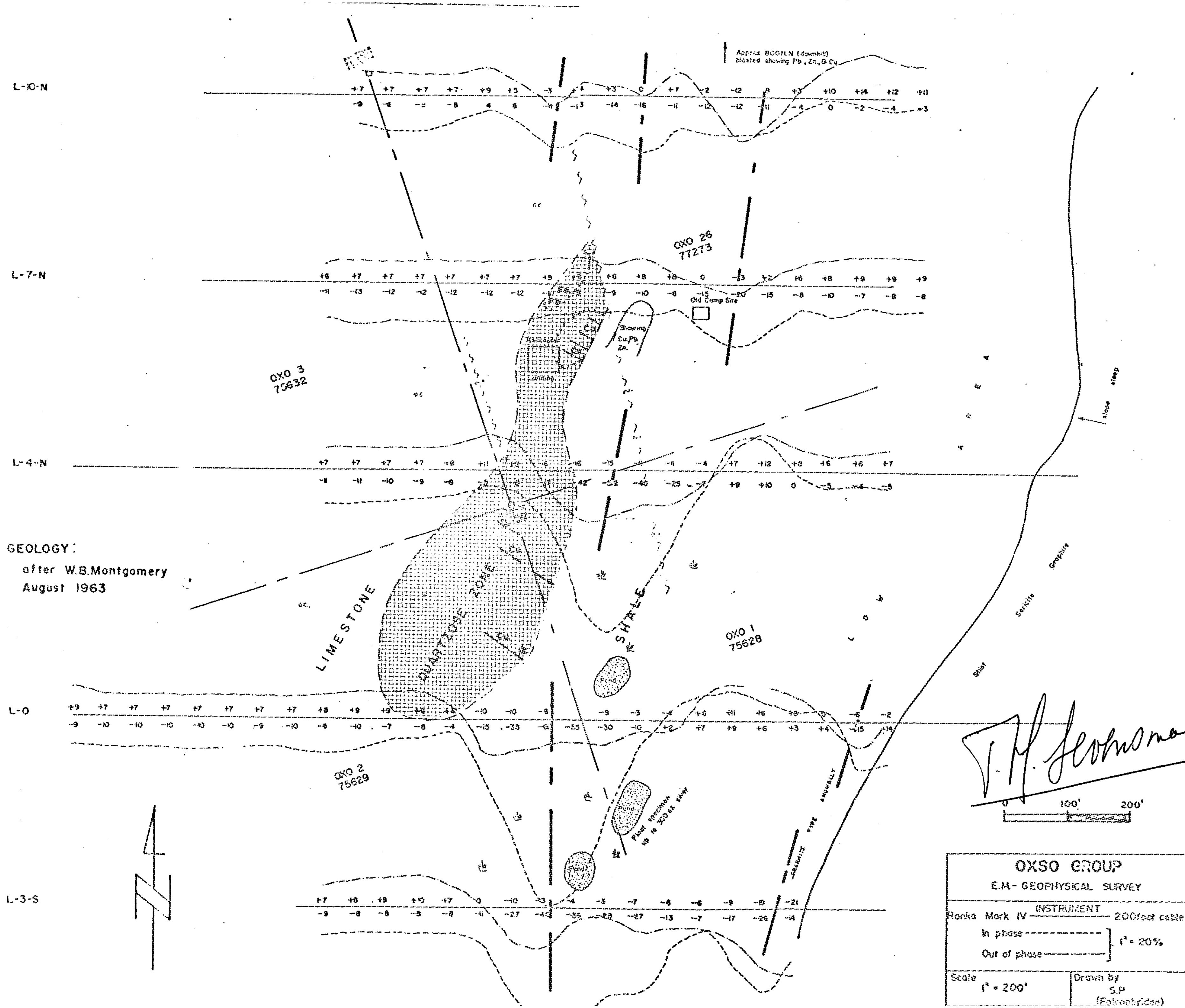
SCALE:- (miles)

0 1/2 1

FIG. 3

P.H. Sevensma

TRANS YUKON EXPLORATION LTD.	
OXO GRP. - CLAIM MAP	
Watson Lake M.D.	105 F-9
P.H. Sevensma Consultants Ltd.	Feb. 1968


L-10-N
L-7-N
L-4-N
L-0
L-3-S
Approx. 800ft N (downhill) blasted showing Pb, Zn, & Cu
OXO 26
77273
Old Camp Site
Showing Cu, Pb, Zn.
OXO 3
75632
GEOLOGY:
after W.B.Montgomery
August 1963
LIMESTONE
QUARTZOSE ZONE
SHALE
OXO 1
75628
OXO 2
75629
Pond
Float specimen up to 300 oz. silver
slope
steep
Graphite
Sericite
Schist
0
100'
200'
OXSO GROUP
E.M.- GEOPHYSICAL SURVEY
INSTRUMENT
Ronka Mark IV
200foot cable
In phase
Out of phase
1" = 20%
Scale
1" = 200'
Drawn by
S.P.
(Falconbridge)