

REPORT ON A GEOCHEMICAL SURVEY

ON THE FOX GROUP OF FRONTIER EXPLORATIONS LTD.

Dynasty Area, Yukon Territory

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

D. C. Fridley
RESEARCH REPORT

Approved as to financial worth a. amount

of \$ *10,000.00*
6,684.15

Accepted as reconnaissance work
under Section 33, Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
CONTROL GRID	1
CLAIMS	1
SAMPLING	2
INTERPRETATION OF RESULTS.	3
RECOMMENDATIONS.	4
TIME AND COST DISTRIBUTION	5
Soil Sampling and Testing	
Line Cutting	

MAPS: Location Map
Geochemical Survey Plan
Plan of Fox claims

Scale: 1" = 3 miles
Scale: 1" = 200 ft.

**Report on a Geochemical Survey
on the Fox 1-16 Mineral Claims of
FRONTIER EXPLORATIONS LTD.**

INTRODUCTION

The Fox Group consists of 64 mineral claims, in the Whitehorse Mining Division, situated 40 miles northwest of Ross River, Yukon Territory.

Overburden cover is extensive in the area. However, regional mapping by the Geological Survey of Canada indicates the claims group is underlain by flat lying metamorphic and volcanic rocks of Mississippian age.

A geochemical soil sampling survey was carried out by Alrae Exploration Ltd., during the period August 8th to September 3rd, 1966 on the Fox numbers 1 - 16 claims, the two northernmost rows of claims in the 64 claim block. This work was carried out under the field direction of Mr. J. Deighton.

CONTROL GRID

A grid was established by Frontier Explorations Ltd. personnel under the supervision of Alrae Exploration Ltd., using chain and compass. Two east - west base lines were laid out with cross-lines cut at 400 foot spacing and picketing at 100 foot intervals, for a total of approximately 19 line-miles.

CLAIMS - Fox Group, Whitehorse Mining Division

The following claims comprise the Fox Group of Frontier Explorations Ltd.

<u>Claim Name</u>	<u>Record No.</u>
Fox 1 - 8	94177 - 184
Fox 9 - 16	94643 - 650
Fox 17 - 40	94049 - 072
Fox 41 - 64	94185 - 208

The geochemical survey was conducted over the Fox 1 - 16 claims.

SAMPLING

Geochemical samples were collected on a cut grid, with lines running north-south, at 400 foot intervals. Samples were taken at 100 foot intervals along the grid lines. The geochemical soil samples gathered were approximately 1/2 pound in size, of which only a small part was used in testing. Samples were taken from an average depth of 10 - 12 inches, with most from a well developed glacial stony till. This till consists of fines from clay size with stones up to 10 inches diameter. Owing to perma-frost and the depth of the volcanic ash layer, it was not always possible to obtain samples from the glacial till and some samples were taken from the ash layer or the overlying organic layer.

The organic layer of the soil varies in the area from two inches to two feet in thickness. The volcanic ash layer, which is absent in places, varies up to a foot or more in thickness. It is felt that the total depth of overburden in the area sampled is not greater than fifty feet.

Testing of the samples was carried out in the field camp using the Dithizone test for total heavy metals. This test consists of taking a known size of soil sample, placing it in a test tube, adding 5 milliliters of metallic free total heavy metal buffer and millileter of Dithizone solution (dithizone in xylene), corking the test tube and shaking the tube vigorously for 20 seconds. Comparison of color change is made to a known standard.

The area tested was not well suited for geochemical soil testing as it is on a north facing slope. Permafrost is present in much of the area and portions of the area consist of swamp. Vegetation over the claims area consists of open fir, with an undergrowth of alders and berry bushes;

the ground is covered by moss with minor patches of tuff grass. The ground slopes in a northerly direction with a sharp break to the north along the ridge followed by the claim line. A shallow bowl forms the southern part of the claim group with gentle drainage to the west. This area is mostly boggy.

INTERPRETATION OF RESULTS

Samples were taken at various depths, at random intervals across the grid, sampling the organic layer, the volcanic ash layer and the glacial till (soil) layer for a correlation between the three layers and to help in the interpretation of the results. There was no definite correlation from the samples collected, but they were a help in interpretation of the geochemical data.

Initially it was felt the geochemical survey data showed an anomalous area, but on interpretation of the data it was found not to be a true anomaly. This apparently anomalous area occurred in the eastern section of the boggy ground, and the samples were high in organic material and quite wet. The organics in soil samples tend to concentrate heavy metal ions which come out on testing, but are not indicative of what lies underneath the overburden. Organics accumulate heavy metal ions, thus the anomaly would increase yearly.

There are a few scattered geochemical highs found during the soil sampling that cannot be accounted for. These highs may be caused by a mineralized boulder in the glacial till.

Two sections towards the northeastern and southeastern ends of the soil sampling grid are of interest. These two sections have several high values that seem to lie in a straight line. These may be two separate veins or may be highs caused by glacial drift material.


RECOMMENDATIONS

It is recommended that no further work be carried out in this area on the basis of the geochemical survey. Except, however, if some one is in the area, then a 50 foot grid could be run over the areas where there is a possibility of vein deposits. This grid, over a relatively small area, would indicate if these are vein deposits, or if the high geochemical results are from glacial deposits. The ground covered, as mentioned above, is not suitable for a geochemical survey as the area is boggy, which gives false geochemical results, the samples being wet and unusually high in organic content, and the area is underlain by perma-frost, not allowing for free circulation of groundwater thus masking the underlying material.

Report submitted by


J. R. Deighton

Endorsed by


R. Philp, P. Eng.

Time and Cost Distribution
FRONTIER EXPLORATIONS LTD.
Geochemical Survey

Soil Sampling and Testing (Carried out by Alrae Exploration Ltd.)

Labor: J. Deighton (Geologist) Aug. 8-28/66
21 days @ \$20.00/day \$ 420.00
M. Bocking (Assistant) Aug. 8-Sept. 3/66
27 days @ \$13.33/day 360.00

Transportation: Helicopter

August 12, 1966 124.00
August 18, 1966 (1/2 x \$459.00) 229.50
August 20, 1966 124.00
August 23, 1966 (portion of invoice to Alrae) 313.87
\$ 791.37

Miscellaneous:

Room & Board - 48 man days @ 7.50 360.00
Ground transportation 300.00
Air fares - 2 men @ \$150.00 300.00
Chemicals, supplies, etc. 29.28
\$ 989.28

TOTAL CHARGES \$ 2,560.65

Line Cutting (Carried out by Morgan Stewart & Co.)

Morgan Stewart account (see attached
statement) \$ 3,232.00

Helicopter (paid by Alrae Exploration Ltd)

July 19, 1966 \$ 182.00
July 31, August 6, 1966 330.00
Aug. 5 (1/2 x 459.00) 229.50 741.50

Supervision by Alrae Exploration Ltd.

J. Mackie (2 days) 150.00

TOTAL CHARGES \$ 4,123.50

Total charges - line cutting and geochemical survey \$ 6,684.45

Mr. Ivan Todd,
President,
Frontier Explorations Ltd. (N.P.L.)
642 Clarke Drive,
Vancouver, B. C.

August 31st, 1966.

IN ACCOUNT WITH

MORGAN STEWART AND COMPANY LIMITED



1555 Robson Street, Vancouver 5, B.C., Telephone 682-7508

Our File: #5000.
Your P.O.:

For the period July 12th to August 9th, 1966.

Re: Line Cutting on the FOX 1-16 Mineral Claims-Dynasty Area.
19.2 line miles.

3 men: Donald Kemp, 1555 Robson Street,
Vancouver, B.C. Rate Pay: \$28.00/day.

Irvine Urbanowski, 1555 Harwood,
Vancouver, B.C. Rate Pay: \$18.00/day.

Don Adams, General Delivery,
Williams Lake, B.C. Rate Pay: \$18.00/day.

\$64.00/day.

28 days @ \$64.00

\$ 1,792.00

Truck rental @ \$450.00 per month, plus mobilization.

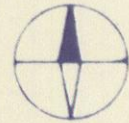
490.00

Room & Board @ \$7.50/man/day, plus miscellaneous camp costs.

950.25

\$ 3,232.25

We hereby certify that this invoice sets forth our true costs.



DYNASTY
(FARO GROUP)
AREA OF CURRENT
DRILLING PROGRAM

DYNASTY
(ACE GROUP)

DYNASTY

KERR ADDISON

BLIND CREEK

FRONTIER
EXPLORATION
LTD.

DYNASTY

ORE BODIES

DYNASTY

DYNASTY

DYNASTY

ARLINGTON

DYNASTY

KERR ADDISON

PELLY RIVER

YUKON

DAWSON CITY

MAYO

DYNASTY AREA

CARMACKS

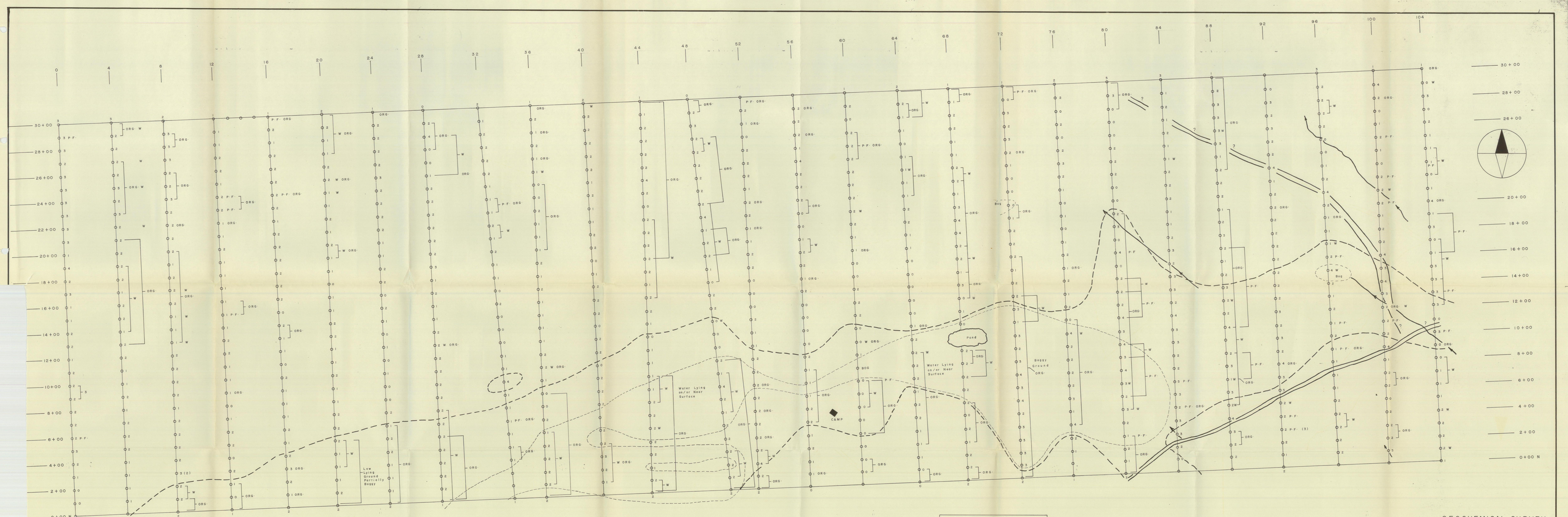
WHITEHORSE

WATSON LAKE

DYNASTY AREA

INFORMATION SHOWN BELIEVED
RELIABLE BUT NOT GUARANTEED
ACCURATE
ALRAE EXPLORATION LTD

SCALE 1"= APPROX 3 MILES



VALUE OF RESULTS		
Total Qty of Dithizone Added	Color	Reading
1 ml.	Green	0
1 ml.	Blue-Green	1
2 ml.	Blue-Green	2
3 ml.	Blue-Green	3
3 ml.	Pink	4
3 ml.	Red	5

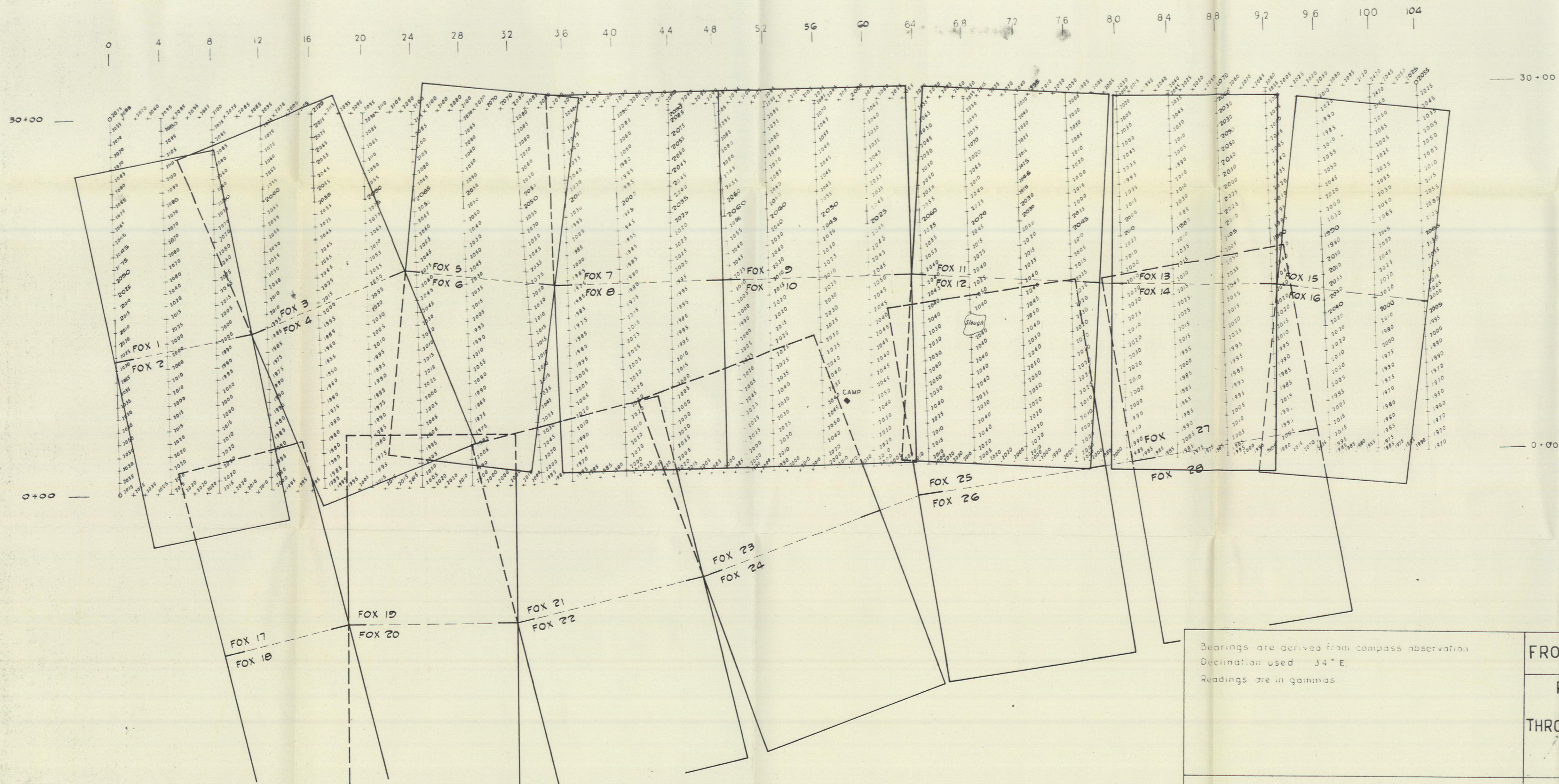
- LEGEND**
- P.F. PERMAFROST
 - W WET SAMPLE
 - ORG SAMPLE HIGH IN ORGANIC CONTENT
 - VEINS(?) INDICATED BY GEOCHEMICAL RESULTS
 - LOW LYING GROUND PARTIALLY BOGGY
 - WATER LYING ON/OR NEAR SURFACE
 - CREEK

GEOCHEMICAL SURVEY

FRONTIER EXPLORATIONS LTD.
 Fox Claims 1-16
 DYNASTY AREA YUKON TERRITORIES

ALRAE EXPLORATION LTD.
 GEOLOGISTS AND ENGINEERS
 VANCOUVER, B. C.

DESIGNED: J.R. Deighton	SCALE: 1" = 300'
DRAWN: C.L. Cory	NO.:
CHECKED: R.H. Philip	DATE: Oct. 25, 1966
ALRAE EXP. LTD. DWG. No.	JOB No.



Bearings are derived from compass observation
 Declination used 34° E.
 Readings are in gammas.

FRONTIER EXPLORATIONS LIMITED
PLAN OF GRID LAYOUT AND
MAGNETOMETER READINGS
THROUGH FOX GROUP OF MINERAL CLAIMS
IN DYNASTY AREA
YUKON TERRITORY

GEMINI EXPLORATIONS LTD.
 1555 ROBSON STREET
 VANCOUVER 5, B.C.

DRAWN D.G.K.	DATE NOV. 2ND '66
SCALE 1" = 500'	CHECKED M.A.R.S. No. 5000-03

B.C.L.S.