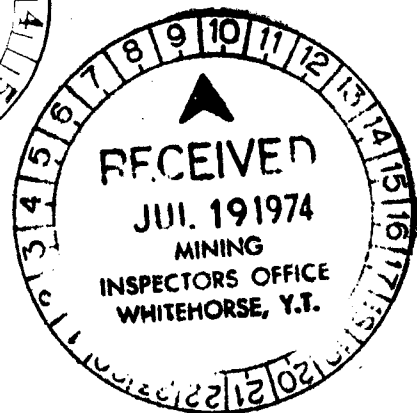




MAGNETOMETER SURVEY
RICO CLAIM GROUP

Sheet 115 1/3, 2 miles N. of Mt. Nansen, Y.T.

Lat. 62°08'N., Long. 137°20'W.

11,300.74

By:

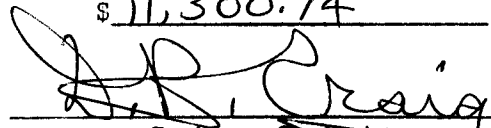
DR. A.E. AHO,
Supervisor for

AEX MINERALS CORPORATION

Work done May 3 - 28, 1974

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

\$ 11,300.74



Resident Geologist or
Resident Mining Engineer

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



Commissioner of Yukon Territory

TABLE OF CONTENTS

	<u>Page Number</u>
LOCATION AND ACCESS	1
BACKGROUND	1
WORK DONE	2
LINE CUTTING	3
MAGNETOMETER SURVEY	3
INTERPRETATION	4
Western and Central Claims	4
Eastern Claims	5
CONCLUSIONS	6
RECOMMENDATIONS	6

MAPS (In back folder)

Claim Location Sketch 1 in. = $\frac{1}{2}$ mile.

Rico Grid Outline 1 in. = 1 mile.

Line Grid by Eastern Associates 1 in. = 2,000 ft.

Magnetometer Survey 1 inch = 400 ft.

*Omitted - not important
AC Hlu*

LOCATION AND ACCESS

The claim group straddles a north-facing permafrost slope and valley bottom mainly along the south side of the head of Klaza River, 2 miles north of Mt. Nansen.

Access is by helicopter, 35 miles from Carmacks and by foot 6 miles from the Mt. Nansen road.

BACKGROUND

Under the writer's direction, the Rico claims were staked in June 1973, recorded June 28, and are now held by AEX Minerals Corporation.

Staking was based on possibilities of porphyry copper mineralization for the following reasons:

1. Geology of the area (Carmacks Sheet, Geol. Surv. Can. Map 340 A) indicates a northwest-trending belt of porphyries cutting Mesozoic Mt. Nansen volcanics and Klotassin botholith.
2. Porphyry copper mineralization is being explored by Cyprus Exploration on the adjoining property to the southeast and many gold and silver prospects occur in the general vicinity.
3. Aeromagnetic map 3312 G shows a northwest-trending belt of magnetic lows corresponding to the porphyry belt with two magnetic lows in the claim area.
4. Previous reconnaissance soil sampling in the claims area showed some lead, zinc and copper anomalies, but was not effective in the valley due to permafrost and stream and sidehill overburden.

As is typical in this unglaciated terrain, this portion of Klaza River has migrated into the unfrozen south-facing slope, leaving scoured permafrost stream detritus on the south side of the valley. It is also thought that this ancient WNW trending stream valley was localized along a zone of weakness, part of a pattern of physiographic of linears in the general area.

WORK DONE

During and after staking, preliminary geologic inspection by the writer showed varied intrusive rocks including altered and quartz-veined porphyries as well as a manganese and iron oxide stained swamp on the claims.

From the end of June 1973, and mainly between August 1st and September 15, 1973, several soil and silt sample traverses and two soil sample grids were sampled and analysed, mainly by S.H. Zillman, prospector. A local magnetic survey was also done on the central part of the claims.

From May 3 to 28, 1974, line cutting and an accurate magnetic survey was done over all the claims except a few on the south east end. Results of these surveys are included in the two reports entitled "Geochemical Survey..." and "Magnetometer Survey...".

LINE CUTTING (See Rico Line Grid Map)

A total of 65 line miles were cut and picketed from May 3 to 11 by Eastern Associates. On most of the claims the lines were on an 800-foot spacing with 200-foot stations, overlapping beyond the claim group; and with 400-ft. spacing and 100-foot stations on a central detailed grid.

MAGNETOMETER SURVEY (See Magnetometer Survey Map)

The survey was done May 5 to 28, by Viktor Mukans, prospector, who had a number of years of experience in magnetometer operation in British Columbia under consultant Joseph Montgomery.

The instrument used was a new battery-operated Scintrex MFD-3 with direct readout to one gamma. The instrument was hand held and read to the nearest 5 gammas.

Baseline stations were read for a total of 8 stations returning in 20 minutes going one way, then 20 minutes back, and straight-line connections were applied for diurnal variations. The maximum difference found was about 30 gammas.

The cross-lines were read outward on one and back on another checking in to the base stations, taking between $\frac{1}{2}$ hour and one hour to make the loop depending on line lengths. Most diurnal variations were less than 100 gammas; straight line connections were applied; and maximum error appears to be in the order of 50 gammas.

The writer calculated the corrections, plotted results on 1 inch = 400 feet and contoured the values at 50 gamma intervals.

INTERPRETATION

Since geologic mapping has not yet been done and the main areas of interest are overburden-covered, only preliminary interpretation is presented:

Western and Central Claims

The area of stronger WNW anomalies on the south may be underlain by Mt. Nansen volcanics, while the main claim area of more subtle magnetics appears to be underlain by intrusives including porphyries.

The main magnetic features of interest are an E-W group of three main subtle magnetic highs flanked and separated by magnetic lows:

- (A) About 4,000 feet in diameter centred at 132E, 6N; with "remnant" NW trends on strike with Mt. Nansen porphyry trend; and surrounded by magnetic lows of which a large area of lows centred about 132E, 30S appears to correspond to the main aeromagnetic low.
- (B) About 5,000 feet or more in diameter centred at 80E on the baseline; with similar NW-trending core.
- (C) About 2,000 feet in irregular diameter centred at 32E, 4S; with indistinct surrounding lows.

The above magnetic highs and lows are modified by an east-west magnetic trend extending from 80E, 20S to 180E on the baseline and eastward.

In addition a strong northwest magnetic high corresponding to the Nansen porphyry trend or some other strong structure terminates abruptly in a magnetic low against the east-west trend, with only the subtle "remnant" trend extending further along strike in anomaly ("A").

It appears probable that the east-west trend reflects a zone or zones of structural weakness that localized Klaza River along it in late Tertiary time, as postulated before staking.

Subject to geologic mapping and further interpretation, it is also tentatively speculated that the subtle anomalies (A), (B) and (C), trending east-west, may prove to be justifiable exploration targets. From magnetics, the general locality of anomaly (A) may be a major structural "cross roads" between strong NW and E-W trends; apparent importance of which is heightened by the adjoining manganese and iron oxide-stained swamp with high geochem, and by the altered porphyry and geochem areas which correspond mainly to the main magnetic low, lying to the south. (e.g. potassic alteration at the core of a porphyry copper deposit would ideally tend to have higher magnetics surrounded by lower magnetics corresponding to sericitic and clay alteration, forming a magnetic pattern like anomaly (A) with its surrounding lows).

Eastern Claims

On the northern part of the Eastern claim area, and extending well off the claims, magnetics are consistently high, perhaps reflecting more or less homogeneous batholithic rocks.

On the southwest part, strong northwest trends appear to correspond mainly to the Nansen porphyry belt. A magnetic low trend at 240E, 4S extends southwest through Rico 14 claim and appears to reflect porphyry with clay alteration and high geochemistry in the vicinity of the old bulldozer trenching. A similar NW - SE trend occurs on Rico 95 and 96 claims but its cause has not yet been investigated. It lies along strike from the geochemical trend near Rico 87 and 88 claim.

CONCLUSIONS

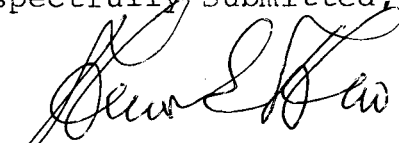
1. The magnetometer survey suggests that the Nansen porphyry belt is interrupted by an east-west structure with three associated sizeable subtle magnetic highs.
2. Geochemical anomalies appear to occur in altered porphyry with low magnetics.
3. The subtle magnetic highs in the overburden-covered valley, or their surrounding intermediate or low magnetics may present justifiable exploration targets (? potassic alteration cores), subject to further interpretation after geologic mapping accompanied by further geochemistry.
4. Further interpretation should lead to several alternative drill targets on the claim group.

RECOMMENDATIONS

Subject to geologic mapping of rock types, alteration and structure and further soil sampling and some additional

magnetometer survey in 1974, leading to final interpretation; it is recommended that a minimum of about 3,000 feet of overburden drilling be done in March 1975 to test for suspected porphyry copper or other type of mineralization. Probable depth of overburden and presence of permafrost would appear to favour this method.

Respectfully Submitted,

A handwritten signature in dark ink, appearing to read 'Aaro E. Aho', written in a cursive style.

Dr. Aaro E. Aho,
Ph.D., P.Eng. (B.C. and Y.T.)

Regional
J. L. L. L.
July 17/74

*Wright Howell Aug 18 / Sept 11
True cutting - May 3-17
May 8-20*

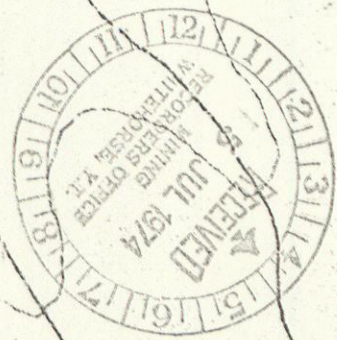
each house
have cutting
road

June 24/74
Groupings for
assessment
work

Proctor
Printed and
May.

claim location sketch
1.10 = 1/2 mi

claim location sketch
8 in. = 400 ft



~~15-5~~

— 60N

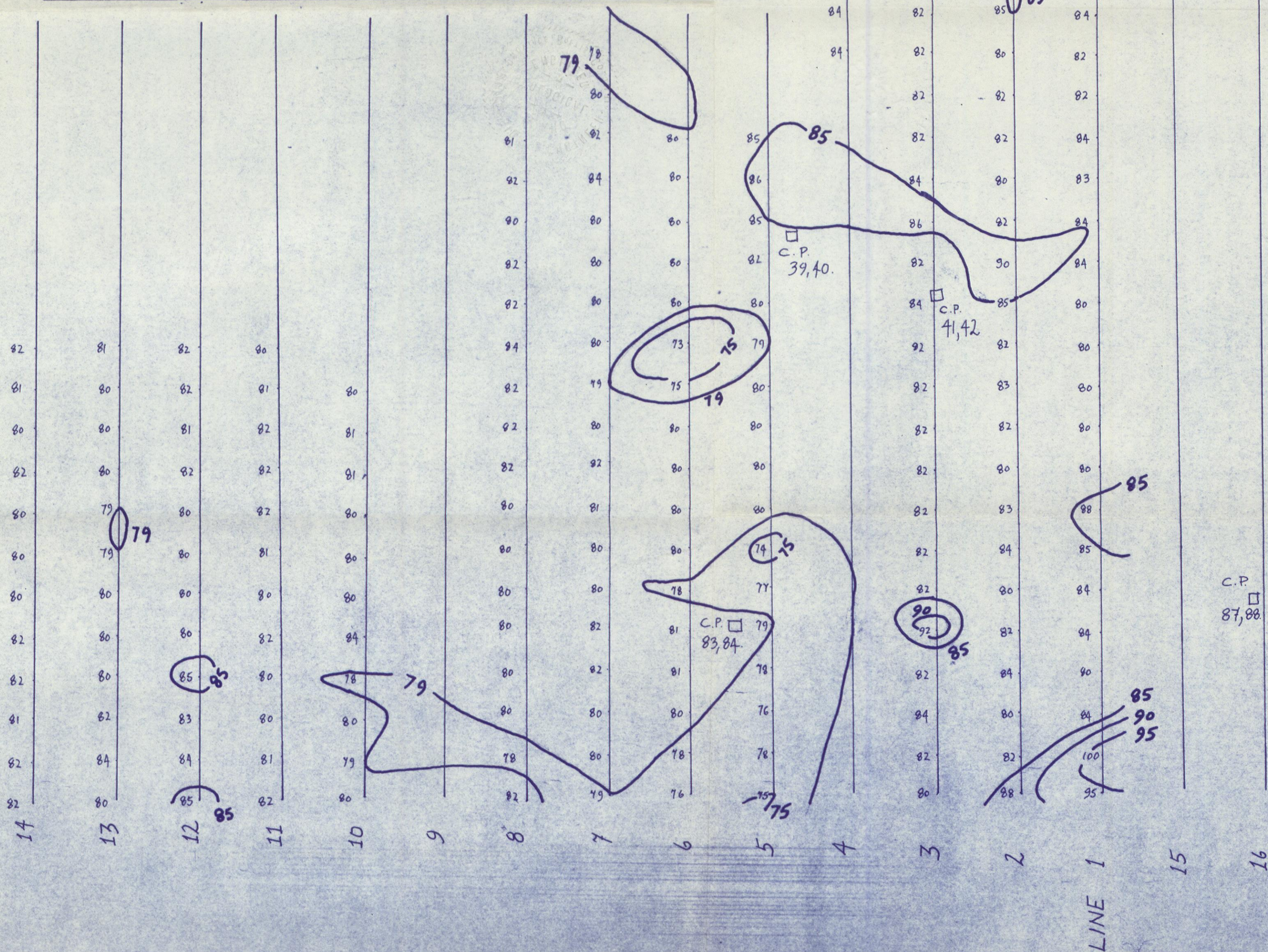
A.E.X. SYNDICATE.
RICO CLAIMS.

Magnetic grid.

Scale 1" = 400'

Inaccurate - not used
B.E. Ba.

N. 30. E. (TRUE)



— 50N

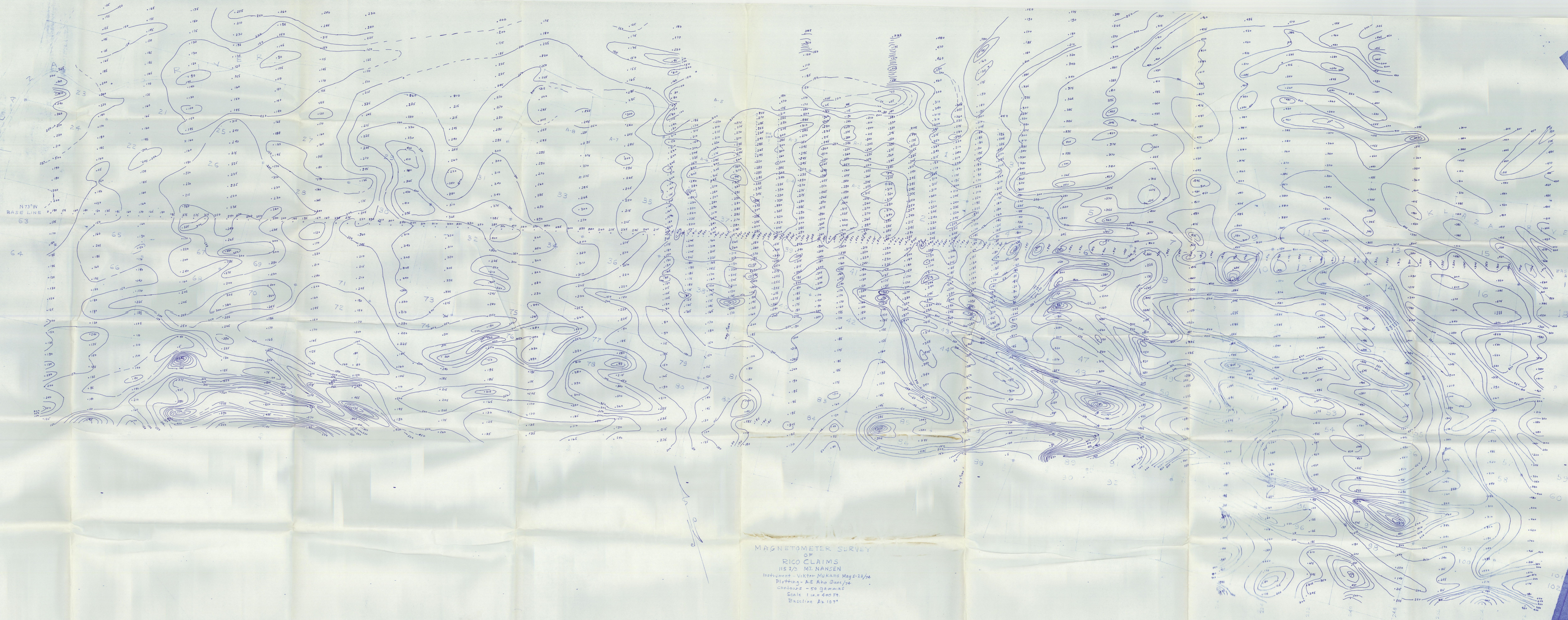
— 40N

— 30N

— 20N

— 10N

— 0N



MAGNETOMETER SURVEY
OF
RICO CLAIMS
115 1/2 MT. NANSEN
Instrument - Viktor-Mukans May 5-28/74
Plotting - A.E. Aho June/74
Contours - 50 gammas
Scale 1 in. = 400 Ft.
Baseline Az 107°

A.E. Aho