

AEX MINERALS CORPORATION

Mt. Nansen - Project

Geology of Rico Claim Group

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

Lat. $62^{\circ} 08' N.$, Long. $137^{\circ} 20' W.$

By:

A.E. Aho
V. Mukans
S.B. Reamsbottom

Work done: 27th August - 5th September 1974

16th September - 22nd September 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

\$6200.00

D. B. Craig

Resident Geologist or
~~Resident Mining Engineer~~

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

[Signature]

B. R. BAXTER
Supervising Mining Recorder

Commissioner of Yukon Territory



TABLE OF CONTENTS

	Page Number
LOCATION AND ACCESS	1
GEOLOGY	1
UNIT 1: Mt. Nansen Group	1
UNIT 2: Granodiorite, quartz monzonite	1
UNIT 3: Granite	2
UNIT 4: Epizonal acidic rocks	2
RELATIONSHIP BETWEEN ROCK-UNITS AND MAGNETICS	3
RECONNASISANCE GEOCHEMISTRY	4
RESULTS AND INTERPRETATION	4
CONCLUSIONS AND RECOMMENDATIONS	5
LIST OF EXPENDITURES	6
APPENDIX	7
Map: Mt. Nansen Project Geology-Geochem Compilation Local magnetometer survey: A 1 - 8 (in back folder)	

LOCATION AND ACCESS

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

GEOLOGY

Outcrop in the claim group is sparse so that geologic interpretation was based mainly on examination of rock float. As the area is unglaciated the float may be a reliable index of the underlying rock type.

Generally the area is underlain by volcanic, granitic and porphyritic rocks of Mesozoic and Tertiary Age.

Four main rock units, whose areal distribution is shown in the accompanying compilation map (in pocket), were recognised.

Unit 1: Mt. Nansen Group

The south side of the claim group is underlain by basic to intermediate volcanic rocks of the Mt. Nansen Group. These outcrop on the north slopes of Mt. Nansen.

The Group consists mainly of flat lying flows of fine to medium grained, dark grey andesites or dacites with small (2-5 mm) phenocrysts of zoned andesine, hornblende or quartz. The writer also noted boulders of volcanic breccia in some creek beds. A coarse grained, porphyritic dacite encountered on Line 120E 54S contained phenocrysts of quartz, andesine and euhedral black books of biotite.

These volcanic rocks are all quite magnetic.

Unit 2: Granodiorite, quartz monzonite

Unit 2 is in sharp contact with the Mt. Nansen volcanics along the southern part of the claim group. To the north it probably grades to granite or is cut by epizonal acidic intrusions.

The unit consists of medium to coarse grained, equigranular to slightly porphyritic, grey granodiorite, with local phases of pink quartz monzonite. Mafic constituents are hornblende and biotite of variable ratio, but mainly hornblende greater than biotite. The east-west trend of the unit is interrupted by a tongue of porphyritic and granitic rocks (Units 4 and 3) around line 120E 30S. Clots of hornblende and biotite within these rocks are quite magnetic, probably due to inclusions of magnetite within the mafics. The only mineralization noted in this unit was some fine grained chalcopyrite and malachite on a fracture surface within a specimen from L 247E 46S.

Unit 3: Granite

Unit 3 probably underlies most of the claim group north of the baseline and also forms part of a south-trending re-entrant in Unit 2 around Line 120E.

It is composed of medium to coarse grained, pink to flesh colored, biotite or mafic poor-granite. Locally it is veined by coarse grained quartz. Around Lines 124E 30N and 132E 34S the unit is rusty weathering and exhibits varying degrees of alternation; mainly kaolinization of feldspars.

Unit 4: Ebizonal Acidic rocks

Unit 4 consists of fine grained, pink, equigranular or porphyritic high level intrusions of granitic composition.

These occur as plug like granophyric intrusions or porphyritic rhyolite dykes both of which are concentrated along, or close to, the contact between Unit 2 granodiorite and Mt. Nansen volcanics (ex. Line 248E 50S or Line 216E 50S); or as acidic to subacidic porphyries of wider areal extent (ex. between Line 0 and 136E, South of the Base Line).

For the most part the porphyries are fresh and unaltered and consist of phenocrysts of quartz and orthoclase set in a fine grained pink quartzo-feldspathic matrix. Granophyre plugs have an equigranular fine grained 'sugary' texture but locally have coarse pegmatitic phases. The small stock on L 248E 50S contains fine-grained disseminated magnetite. This probably explains why this intrusion and a similar one 1600' to the west are lobate magnetic highs. The porphyries farther east have a lower magnetic susceptibility.

Rusty weathering porphyries and granophyre, with extensively kaolinized feldspars, outcrop close to the contact with Mt. Nansen volcanics, on Line 120E 50S. These are due south of a zone of altered granite around L 128E 38S.

RELATIONSHIP BETWEEN ROCK UNITS AND MAGNETICS

Apart from Unit 4 granophyric plugs, which contain disseminated magnetite, the more basic or mafic rich rocks are more magnetic than the acidic mafic poor rocks.

The southern part of the claim group is underlain by Mt. Nansen Volcanics. A well defined east-west-trending magnetic lineament which extends from L256E 50S to L 152E 8S partially defines the contact between the volcanic rocks and Unit 2 granodiorite and also outlines two plugs of magnetite bearing granophyre of Unit 4.

A magnetic low zone about 4000' in diameter centred at 132E 6N is probably underlain by granite and acidic porphyry. Exposure is inadequate to demonstrate any relationship between alteration and subtle variation in magnetics.

Another zone of low magnetics 5000' in diameter centred on L 80E - B/L is also probably underlain by porphyry and/or granite.

RECONNAISSANCE GEOCHEMISTRY:

Soil and silt samples for geochemical analysis were routinely collected during the geological survey of the claim group. The samples were collected from below the zones of organic material and volcanic ash with the aid of a small shovel. Silts were collected from some small creeks. The samples were analysed for Cu, Pb, Zn, Ag and Mo by Barringer Research, Whitehorse. The results were plotted on the accompanying compilation map and local backgrounds chosen for the metals by visual scanning are:

Copper	25 ppm
Lead	20 ppm
Zinc	85 ppm
Silver	1.2 ppm
Molybdenum	3 ppm

RESULTS AND INTERPRETATION:

Western Claims:

One sample from close to a probable fault zone in Unit 4 porphyry, in Rico 66 claim indicated slightly anomalous copper and lead and may be indicative of fault-controlled or vein type mineralization in the porphyry. Most samples from this area are non anomalous.

Central Claims:

Slightly to moderately anomalous copper, lead, zinc and silver values were detected in samples overlying the zone of altered granite and porphyry in Rico 38 and 84 claims. In addition to this zone, a break in slope sample on Rico 4 indicated anomalous copper, lead, zinc and silver values within Unit 3 granite, and a Mn swamp zone in an area of low magnetics in claims A-1 and A-3 gave slightly anomalous zinc values.

The combination of favorable rock types, low magnetics and anomalous geochemistry makes the central claim block a prime area for additional follow-up.

Eastern Claims:

For the most part geochem samples from the eastern claim block, which is underlain mainly by fresh granodiorite, were non-anomalous. The highest anomalous lead, zinc and silver values were from Rico 99 close to the contact between Mt. Nansen Volcanics, Unit 2 granodiorite and a small plug of granophyre. Again the geochemistry may be indicative of local vein type mineralization. Other slightly anomalous lead, zinc and silver values were found on Rico 55. On the basis of the anomalous geochemistry some additional sampling in and around the granophyre plug on Rico - 97 would be justified.

CONCLUSIONS AND RECOMMENDATIONS

Geologic mapping, in conjunction with the magnetometer survey, led to a more complete geologic interpretation of the Rico Claim Group. A search for porphyry copper or other type of mineralization should be concentrated mainly in the central claim block because it is underlain by altered porphyry and granite which have associated low magnetics and anomalous geochemistry.

A logical next step in property evaluation would be to carry out an IP Survey of the central claim block and, depending on results, overburden-drill any targets which are defined by the survey.

Respectfully Submitted,

Stanley B. Reamsbottom Ph.D.

STANLEY B. REAMSBOTTOM.

STATEMENT OF EXPENDITURES

1974 Geology, Geochem and Local Magnetometer
Survey on Rico, A 1 - 8, AX 1 - 12 Claims,
Mt. Nansen, Yukon Territory

Field and camp equipment	\$ 300.00
Salaries and supervision	2,100.00
Helicopter support	2,227.25
Insurance	53.50
Geochemical analysis	253.00
Magnetometer	315.00
Radio rental	145.00
Food and living expenses	800.00
	<hr/>
	\$6,193.75
	<hr/> <hr/>

For assessment purposes also include \$7,400 not applied
by Dr. Aho in previous reports.

Stanley B. Kearsbolter Ph.D.

A P P E N D I X

LOCAL MAGNETIC SURVEY: CLAIMS A 1 - 8

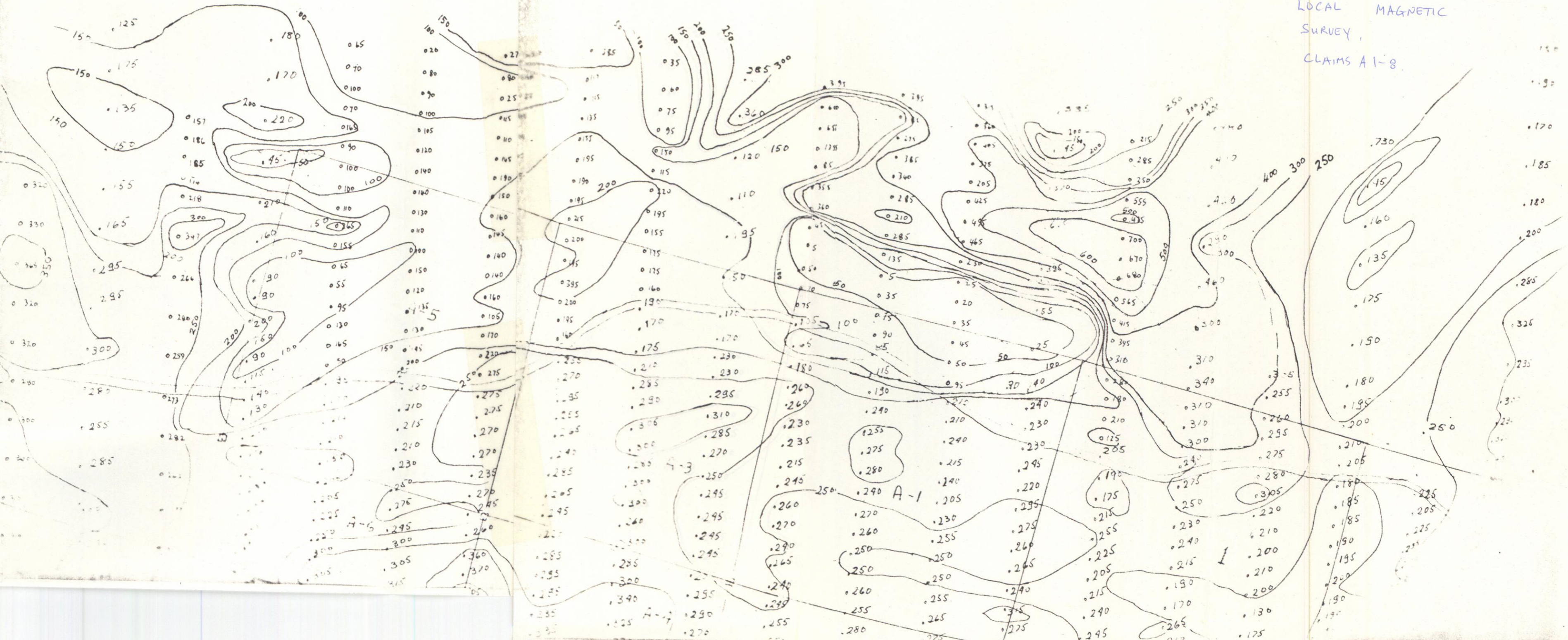
In the period 27 August - 15 September 1974 a local magnetometer survey was conducted on claims A 1 - 8 to fill in an area not completely covered by the Survey of May 3 - 28, 1974. (See previous report by Dr. A.E. Aho "MAGNETOMETER SURVEY, RICO CLAIM GROUP").

RESULTS:

The magnetic features defined parallel those of the previous survey. A pronounced magnetic low - high doublet north of claims A - 1 and Rico 1 probably parallels the contact or transition between less susceptible granite and more magnetic granodiorite or quartz diorite. (See map in pocket).

Sbl

LOCAL MAGNETIC SURVEY, CLAIMS A1-8





AEX MINERALS CORP.
NANSEN PROJECT.
 GEOLOGY GEOCHEMICAL COMPILED

LEGEND

4	Porphyry, epigranite, granophyre, apatite
3	Granite
2	Granodiorite with minor qtz, monzonite
1	Mt. Nansen Volcanics, andesite, minor dacite

○ A1 Specimen location with Cu, Pb, Zn, Mo, Ag geochem. where colour indicates type of float
 ○ Outcrop
 // Alteration. Mainly kaolinized feldspars
 --- Geologic contact. Defined, assumed
 + Claim Post
 ~~~~ Creek

