

GEOPHYSICAL REPORT

ON

THE BLIND, COLA AND GRAN GROUPS

PELLY RIVER AREA, Y. T.

BY

B. I. F. BREAKEY

OCTOBER

1954

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Report on the Magnetometer Survey of the Blind, Cola and Gran
Group of Claims, Pelly River Area, Yukon Territory.

INTRODUCTION

This report is based on a survey made on the above-mentioned claims in August and September, 1954. Two base lines, "A" and "B", were run in an East-West direction, one mile apart. Cross-lines were cut and chained at 800 foot intervals over most of the groups.

Readings were taken on a Sharpe Vertical Variometer with a sensitivity of 18.3 gammas per scale division, at 100 foot intervals. Where anomalous areas were encountered, readings were taken at 50 foot intervals.

CONCLUSIONS

With the exception of two small anomalous zones, magnetic intensities varied only slightly over the area surveyed. These are shown on the accompanying map.

The anomaly on claim Blind 25, was delimited to an area 300 feet long and 100 feet wide, striking in a N.E.-S.W. direction. A number of outcrops observed surrounding this area were massive, fresh, medium-grained granodiorite, which precludes the possibility of any large sulphide zone. The anomaly may have been caused by (a) development of magnetite within the granodiorite mass or (b) the concentration of magnetite within the glacial or stream sands, which cover the area.

The anomaly on Cola 16 is slightly greater in area but no outcrops are to be found within it. However, massive granodiorite outcrops can be seen on the outer perimeter of the anomaly. This zone could be of some interest but is rather limited in extent.

DETAILS OF THE SURVEY

Magnetometer readings over the sulphide body to the West of these claims showed a variation of 1200 gammas to 1800 gammas over the average base readings. Work on these claims did not show any differences comparable to this with the exception of the two anomalies mentioned above.

Anomaly No. 1

This zone is located about co-ordinates 800 West, 3,000 North. Detailed work at 50 foot intervals was carried out and the anomaly was confined to an area 300 feet long and 100 feet wide, striking N.W.-S.E. Numerous outcrops were observed around this zone and these consisted of massive, medium-grained diorite. No sedimentary outcrops were observed similar to those found in, or near, the sulphide zone developed by Prospectors Airways to the West some two miles.

This anomaly may have been caused by the development of magnetite within the granodiorite or by the concentration of magnetic sand in the glacial silt overlying the granodiorite.

DETAILS OF THE SURVEY (Continued)Anomaly No. 2


This anomaly is located about the co-ordinates 800 East and 2,400 North and was fairly well confined by close readings with the exception of the South-east corner. Time did not permit the completion of this work.

There are no outcrops in the immediate area but there is a possibility the anomaly may occur along an irregular granodiorite greenstone contact in which magnetite has been developed; or it may have been caused by concentration of magnetic sands.

Anomaly No. 3

On line 1600 feet East and at 600 and 1100 North, two small anomalies were noted, but no detailed work was carried out around them. These deserve investigation as the most northerly one could conceivably join the South-East corner of anomaly No. 2, although both of these are on high ground in the vicinity of massive granodiorite outcrops.

The only other anomalous feature is the slightly lower readings obtained over the granitized sediments on the Gran group. This is of little significance as there is considerable outcrop in the area, which was prospected in detail.


B. I. F. Breakey.

Toronto, Ontario
October 18, 1954.

105 K/S

GEOLOGICAL REPORT

ON

THE BLIND, COLA, GRAN AND SCRAM GROUPS

- PELLY RIVER AREA -

BY

B. I. F. BREAKY

Toronto, Ontario.

October, 1954

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A GEOLOGICAL REPORT
ON THE
BLIND, COLA, GRAN AND SCRAM GROUPS.
PELLY RIVER AREA

INTRODUCTION

This report covers the detailed geology on Blind, Cola, Gran and Scram group of claims. These claims are located five miles North of the Pelly River and immediately North of Blind Creek, a tributary of the Pelly River. The centre of the groups is located approximately at:-

Latitude - 133° 05' West
Longitude - 62° 14' North

Following the discovery of a lead, zinc, silver deposit by Prospectors Airways on Vangorda Creek, the Blind and Cola groups were staked in the early Fall of 1953. Later in November, the Company staked the Gran and Scram groups and subsequently optioned the Blind and Cola groups.

The work crews were serviced by air from Whitehorse, Y. T and supplies were landed on Scimitar (Jackknife) Lake, about two miles South-West of the West boundary of the Blind Group.

Geological mapping was carried out on a scale of 400 ft. to one inch. Two East-West base lines, "A" and "B", were cut one mile apart and North-South lines were cut at 800 ft. intervals across the groups, with exception of the six claims in the Scram group where no outcrops were found.

GENERAL GEOLOGY OF THE AREA

According to J. R. Johnston, in Memoir 200, 1936, the oldest rocks in the area are those he assigned to the Yukon Group. Granitized sediments, exhibiting gneissosity and crystalline limestone resembling the Yukon Series, were found on the Gran Group in contact with later grey granite. Older unaltered quartzites are to be found in the northern part of the Blind group.

Younger sediments were deposited further South and West and the whole area intruded by a granodiorite plug or sill. Subsequent erosion removed most of the younger sediments with the exception of a basin in the Vangorda Creek drainage area. A few remnants of the younger Paleozoic quartzites and argillites only, remain to be seen on the claim groups concerned in this report.

The sulphide deposits currently being drilled by Prospectors Airways in the Vangorda Creek basin are overlain by Tertiary conglomerates, slate and quartzites and occur within a sericite schist bed which may have been of sedimentary origin: all formations are flat-lying.

GENERAL GEOLOGY OF THE AREA (Continued)

The object of the geological work carried out was to determine the extent of younger sediments and the possibility of sulphide deposits within them.

Mapping revealed only small isolated remnants of the sediments in protected topographic undulations. The main mass has been eroded by glacial action from the North-West. These isolated outcrops are shown on claims Blind No.4, Blind No.1 and Blind No.42. No mineralization was observed in these outcrops.

The widespread granodiorite intrusive, where observed, varied in its characteristics over remarkably short distances. From the study of numerous outcrops in several sections, it appears to have been a magmatic differentiate varying from basic to acid in character. For the most part, it was medium grained and quite acid in appearance, and occasionally was altered to sericite schist.

Volcanic rocks were found over limited areas on the Cola group. On claims Cola No. 7 and Cola No. 8, a narrow acid tuffaceous band was mapped showing little alteration. On Cola Nos. 16, 17 and 18, green carbonate schists were found exhibiting faint pillow structures suggesting a volcanic origin and these were mapped as such.

TOPOGRAPHY

The claims lie on a southerly slope which, with few exceptions, is quite gentle. The difference in elevation between the North end of the Gran and the South end of the Blind and Cola groups is roughly 2,000 ft. Except for a few small clumps of spruce, all the area has been burned. Glacial silt covers a considerable area, particularly in the southern and eastern sections where a thickness of 50 ft. or more was noted.

GEOLOGY

1. Structural Geology of All Groups

The rocks, where exposed, exhibit a N.W.-S.E. alignment. Although there are some local variations, the schistosity in general conforms to this. Dips vary in all directions locally and are usually flat.

From the air, one is impressed with deep fissures striking in a North-East direction and occupied by swamps or creeks. These fissures, or faults, may have been formed by the acid intrusion which resulted in the formation of Mgt. Mye, a few miles to the North of the group. No lateral movement was noted along these fractures and it is reasonable to assume they represent a series of block faults conforming to the acid intrusive.

2. Alteration in Rocks

The development of a gneissic structure in the older sediments near a granitic contact was observed on the Gran group. These rocks were probably originally a mixture of slates and quartzites. Biotite and garnetiferous gneisses were developed subsequent to the acid intrusion.

GEOLOGY (Continued)

2. Alteration in Rocks (Continued)

Sericitization as exhibited in the sulphide zone to the west of the group was found only in one or two isolated outcrops on Blind No.4. It appeared to have been developed from a shaly-slate or argillite. However, heavily sericitized schists were found grading into medium-grained crystalline, fresh-looking granodiorite, suggesting its origin as being granodiorite.

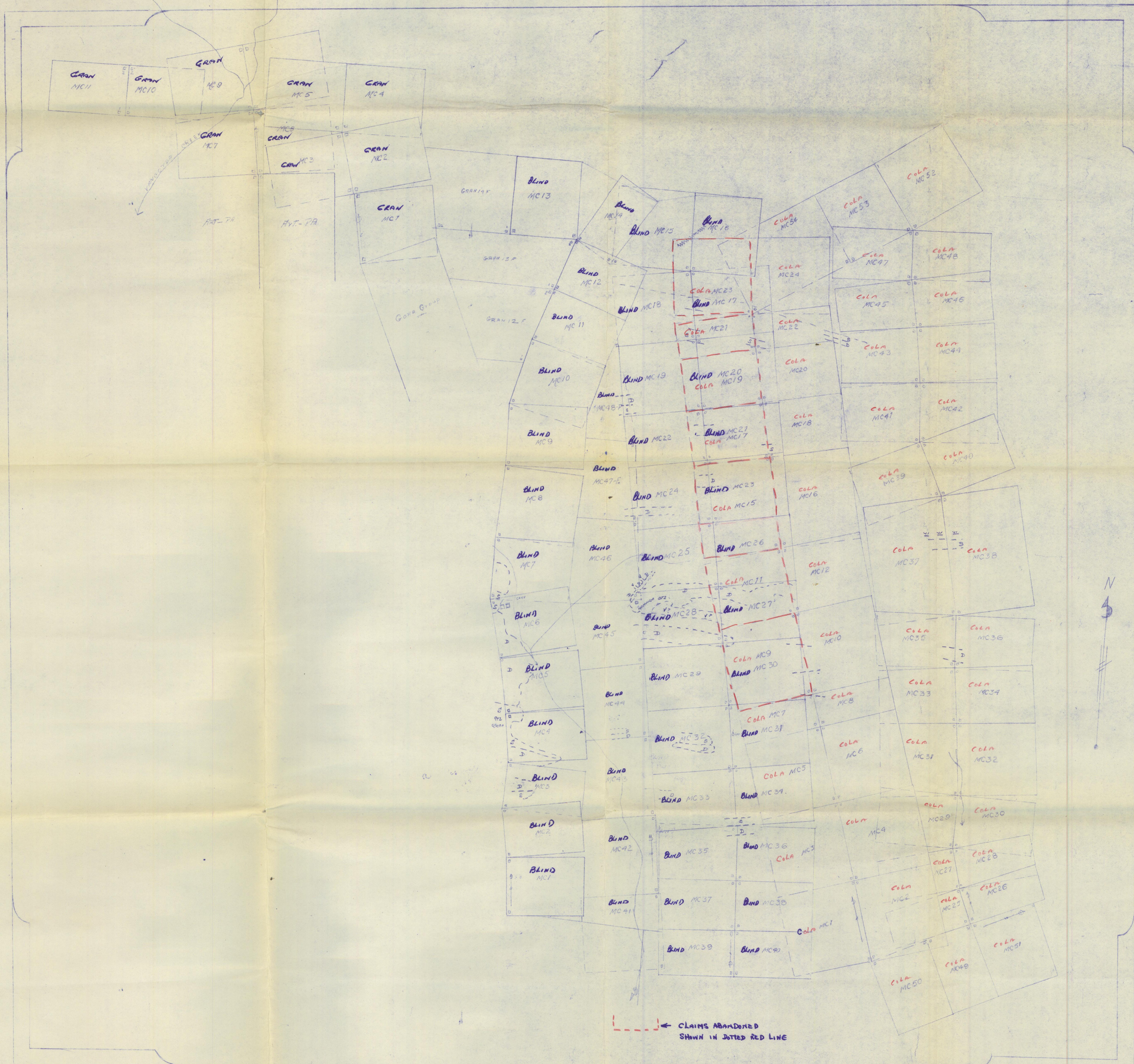
Carbonitization was found in a few isolated areas in the granodiorite, quartz stringers and narrow veins were usually, but not always, present. No sulphides were observed in these areas.

CONCLUSION

From the work accomplished in the field, it would appear that the possibility of finding a large sulphide deposit on the group rather remote. However, a good deal of the southern and eastern part of the Blind, Cola and all of the Scram group, is completely covered with glacial silt. A magnetometer survey carried out subsequent to the mapping revealed two small anomalies. (For details of this survey see separate report.) These anomalies are of little significance as they are limited in area and the anomalous zone on claim Blind No.25 was surrounded by fresh, medium-grained granodiorite. The anomaly may have been caused by the presence of magnetic sands in the overburden or by magnetite developed in unexposed granodiorite. The anomaly is to the East of this one, on Cola No.16, is of approximately the same order magnetically and is limited in area also.

B. J. Brinkley

Dated at
Toronto, Ontario,
October 15, 1954.

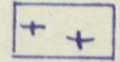
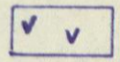
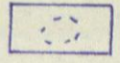
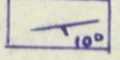
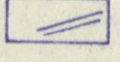
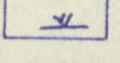
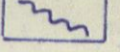


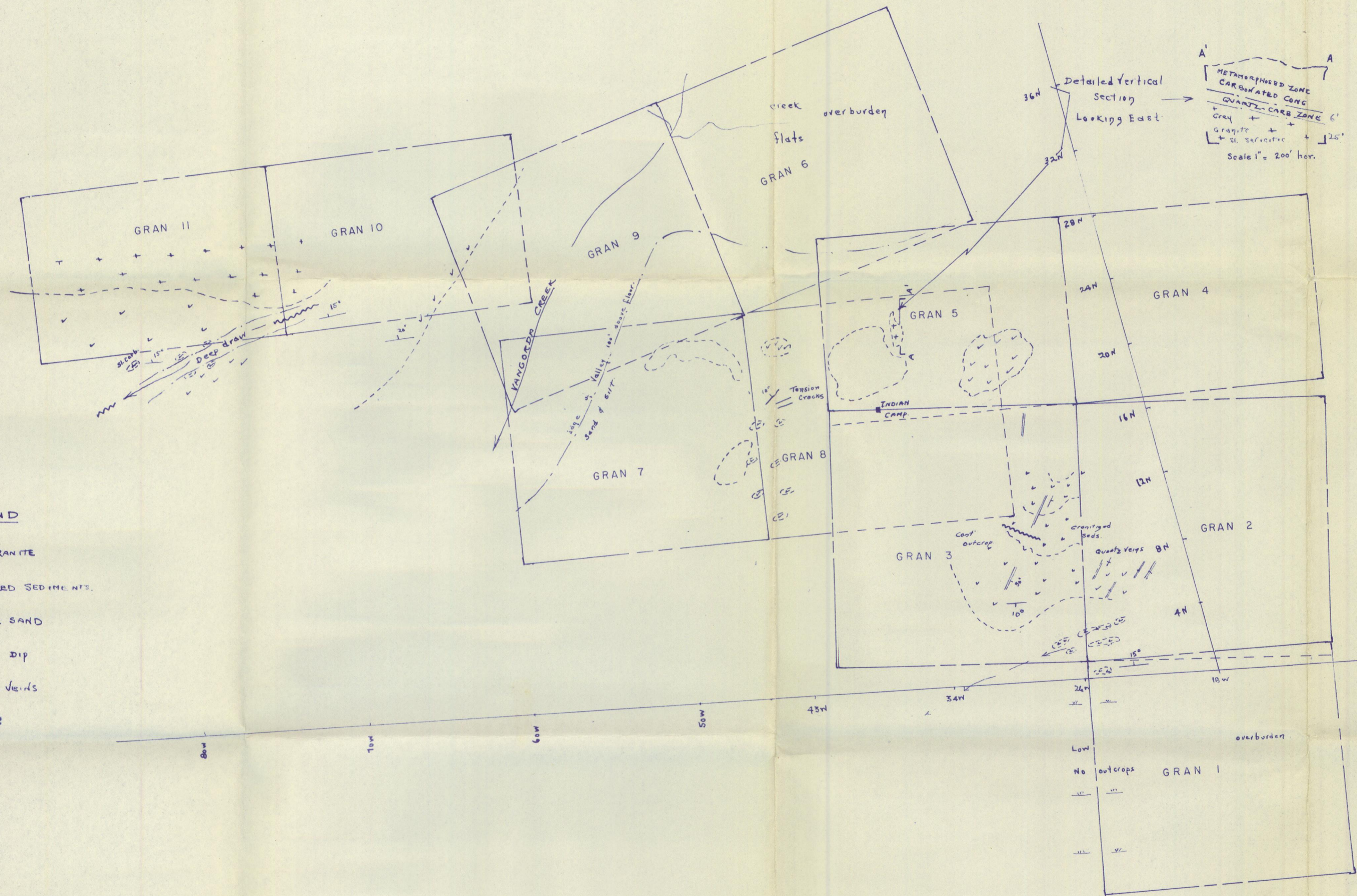


- LEGEND**
- GRANITE - Coarse - Grey
 - GRANODIORITE - Massive Acid to Basic
 - SERICITE SCHIST - Derived from Granodiorite
 - VOLCANICS - Green Carbonated Schists & Contact Zones
 - SEDIMENTS - Dark Slaty Schist
 - SERICITE SCHIST - Derived from Sediments
 - SEDIMENTS - Quartzite
 - SEDIMENTS - Paragneiss, Granitized
 - CARBONATED ZONE
 - QUARTZ VEIN
 - DIP-STRIKE
 - SCHISTOSITY
 - FAULT
 - CLAIM POSTS
 - SWAMP

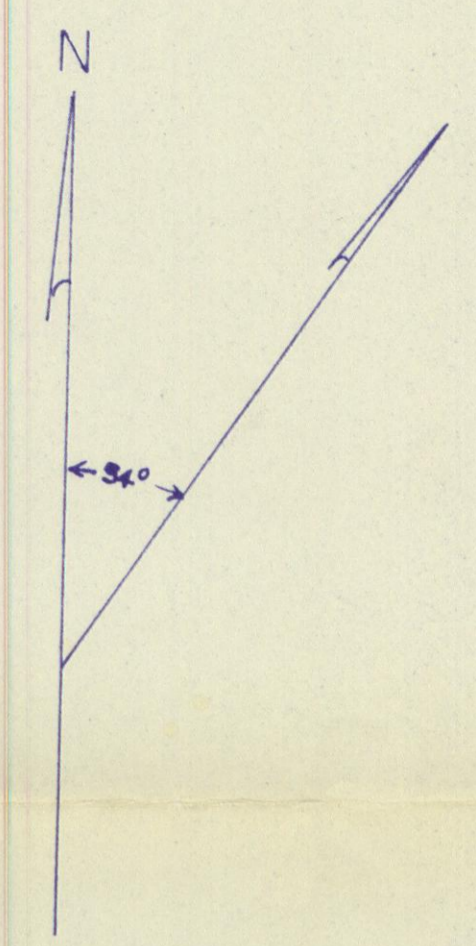
Geological Map
of
BLIND AND COLO GROUPS
Pelly River - Blind Creek, Y.T.
SCALE 1" = 400'

To Accompany Report By B. I. F. BREAKEY
Tr'd 15. N. Oct 1954.

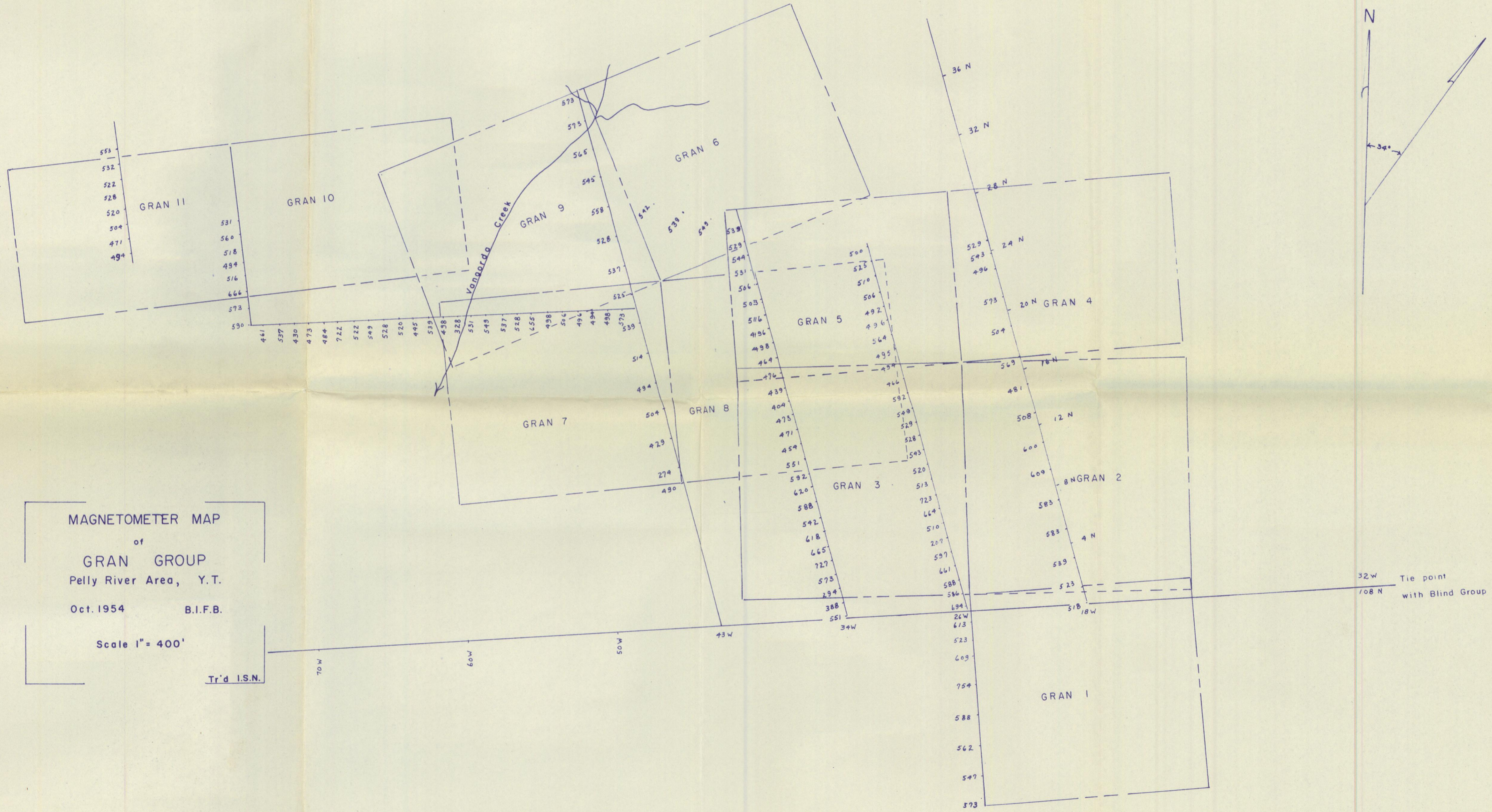
- LEGEND**
-  GREY GRANITE
 -  GRANITIZED SEDIMENTS
 -  CLACIAL SAND
 -  STRIKE - DIP
 -  QUARTZ VEINS
 -  MUSKEE
 -  FAULT



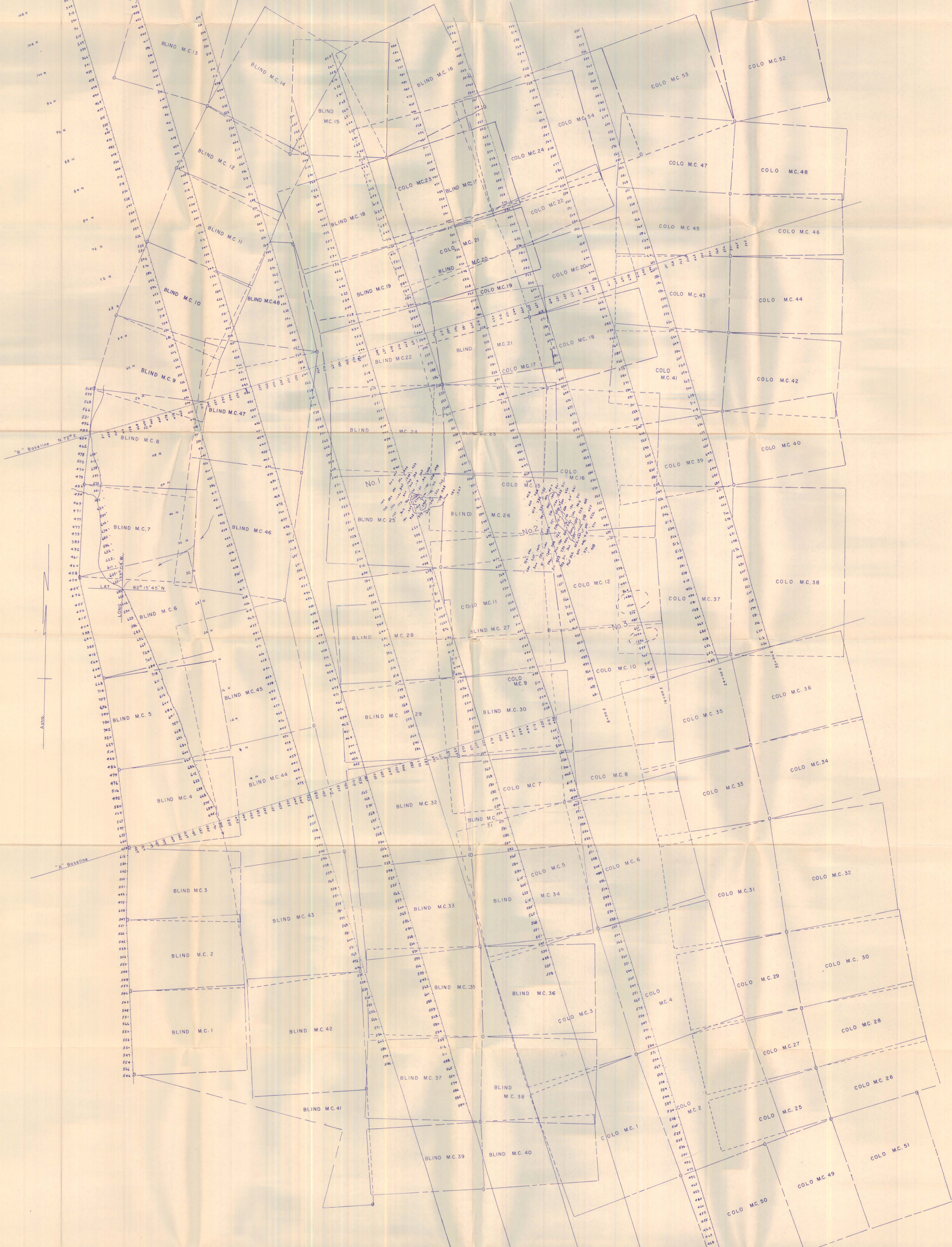
GEOLOGICAL MAP
 OF
GRAN GROUP
 PELLY RIVER AREA.
 BETW. B.L.F.B.
 - Scale 1" = 400'.



32W 108N Tie point with BLIND GROUP.
265°



MAGNETOMETER MAP
of
GRAN GROUP
Pelly River Area, Y.T.
Oct. 1954 B.I.F.B.
Scale 1" = 400'
Tr'd I.S.N.



Magnetometer Survey
 of
 BLIND AND COLO GROUPS
 Pelly River - Blind Creek, Y.T.
 SCALE 1" = 400'
 To Accompany Report By B. I. F. BREAKY
 Tr'd 15.4 Oct. 1954.