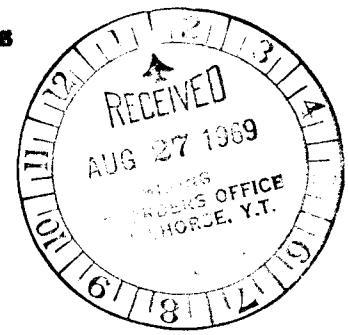
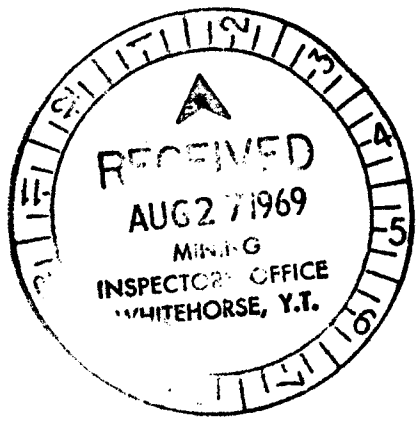
Report on a Magnetometer Survey on the Cam 1 to 48 Mineral Claims of Arrow Inter-America Corp. Tincup Lake Area, Y.T.





J. Mackie, P. Eng.
Arrow Inter-America Corp.
August 25, 1969

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

RESIDENT GEOLOGIST

Approved as to cost in the amount of: $ 4600.00

RESIDENT MINING INSPECTOR

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

COMMISSIONER OF YUKON

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LIST OF ILLUSTRATIONS

INTRODUCTION

The Cam group consists of 48 mineral claims situated on the east side of the Kluane River, eight miles north of Mile 1118 on the Alaska Highway.

Minor asbestos fibre has been found in an ultrabasic mass measuring approximately 1 mile by 2 miles. A magnetometer survey was undertaken to outline the ultrabasic mass and try to locate concentrations of secondary magnetite which may be associated with fibre within serpentinized zones.

Arrow Inter-America Corp. holds the Cam group by option. They carried out a line cutting program and magnetometer survey from June 10 to August 8, 1969, inclusive. Mr. D. Kasian, B.Sc., was field supervisor under direction of the author.

LOCATION AND ACCESS

The claims are situated at latitude 61°42' and longitude 139°21', approximately 8 miles north of Mile 1118 on the Alaska Highway as shown on Fig. 1.

Personnel and supplies were trucked from Whitehorse to Mile 1118 on the Alaska Highway, thence by helicopter to the campsite.

TOPOGRAPHY AND VEGETATION

The claim block straddles an east-west trending valley, extending from the valley bottom to above treeline, which occurs at 4,000 feet elevation. Most of the claims are covered by stands of spruce and balsam, except in boggy areas where buckbrush and willow are prevalent.

CLAIM DATA

Arrow Inter-America holds, by option from T. Saddlier-Brown and partner, the Cam 1 to 48, contiguous, full size mineral claims as shown on claim sheet 115-G-11, Whitehorse Mining Division, Y.T. Grant numbers of the claims are as follows:

Claim Name	Grant Number
Cam 1 to 24	Y25781 to Y25804
Cam 25 to 40	Y30415 to Y30430
Cam 41 to 48	Y35726 to Y35733

HISTORY

In 1954 Northwestern Explorations Ltd. had the showing staked and carried out limited trenching before allowing the claims to lapse.

The Cam 1 to 24 claims were staked in August 1968 by T. Saddlier-Brown et al. Arrow optioned these claims and staked a further 24 claims.

GEOLOGY

The property is underlain by east-west trending sediments and metasediments of the Yukon Complex of Precambrian or later age, which dip 45° southwards. (GSC Memoir 340, Kluane Lake Map Area, Y.T. J.E. Mul ler). An ultrabasic mass, measuring 2 miles in a northwest direction and 1 mile wide, appears to lie conformable within the Yukon Complex. Its composition varies from gabbro to peridotite.

Serpentinization with associated magnetite and minor asbestos is apparent along the north boundary of the mass.

Short, hairline to 3/8", cross fibre chrysotile is found over a 200 foot width along the boundary between claims Cam 1 and 2. It occurs in moderately to highly altered peridotite, adjacent to the contact with Yukon Complex rocks. A visual estimate of fibre content is less than 1%. Other fibre occurrences of limited dimensions are apparent, but as yet no continuity has been established.

MAGNETOMETER SURVEY

(i) Type of Instrument

A Sharpe MF-1 fluxgate magnetometer, which measures the vertical component of the earth's magnetic field, was utilized. It is a hand held instrument that needs only coarse levelling and no orientation. It features direct reading on full scales which range from ±3,000 to ±100,000 gammas. Maximum readability on the lowest scale is 5 gammas. A wide latitude adjustment makes it possible to zero the instrument in all but the most unusual cases.

(ii) Field Procedure

The survey was carried out on a picketed grid, oriented north-south. A Brunton compass and nylon chain were used for control. A transit survey is presently in progress to tie in all claim posts, grid lines and asbestos occurrences.

The instrument was zeroed for the property. Master stations were then established along the base lines. At least two readings were taken at each master station and the average used for subsequent loops. A maximum of 20 minutes time was allowed for any loop, when master stations were being established. If the readings did not agree within 20 gammas the loop was run again.

Closed loops were then run along cross lines taking readings at 100 foot intervals, each loop originating and terminating at a master station. Maximum elapsed time for any loop was one hour.

Field records kept included station, instrument reading and time when the reading was taken.

The operator was stripped of all ferromagnetic objects which may have influenced the magnetometer readings.

(iii) Calculations

The only calculation necessary is to correct for diurnal variations.

If the initial and final reading for each loop are identical no correction is necessary. But, as is usually the case, the initial and final readings are not the same. The difference is prorated to each reading on a time basis such that the final reading is the same as the initial reading. Each station is adjusted in order to give a final value relative to the initial master station.

(iv) Interpretation

Final values for all survey stations are shown on Fig. 2. There are marked increases of magnetic intensity along the north and south boundary of the ultrabasic mass which probably indicate areas of serpentinization.

Preliminary geological mapping by Kasian indicates that serpentinization with secondary magnetite and minor asbestos fibre is apparent near the northern contact of the ultrabasic and the core of the ultrabasic mass is an unaltered gabbro. Lack of outcrops prevent defining the southern contact.

The pronounced lineal character of the ultrabasic mass boundaries suggest that faulting has been a controlling factor of serpentinization.

CONCLUSIONS AND RECOMMENDATIONS

No concentrations of asbestos fibre of economic grade or dimensions have been located on the claim group. However a zone of serpentinization has been indicated along the boundary of the ultrabasic mass. Some fibre is known to occur along the altered fringes of the ultrabasic mass.

It is recommended that a program of trenching and hand pitting be undertaken to determine if there is asbestos fibre of economic interest associated with serpentinization. If this proved unsatisfactory a pack sack drill could possibly be used to indicate the presence of fibre, but, larger equipment recovering N or H size core would be necessary to assess the economic potential of any asbestos concentration.

Respectfully submitted:

J. Mackie

J. Mackie, P. Eng.

I, J. MACKIE, of P. O. Box 255, Whitehorse, Yukon Territory, P. Eng., MAKE OATH AND SAY THAT: the following costs were incurred by Arrow Inter-America Corporation between June 10 and August 8, 1969, inclusive, to carry out a magnetometer survey on the Cam 1 to 48 mineral claims as shown on claim sheet 115-G-11, Whitehorse Mining Division, Yukon Territory.

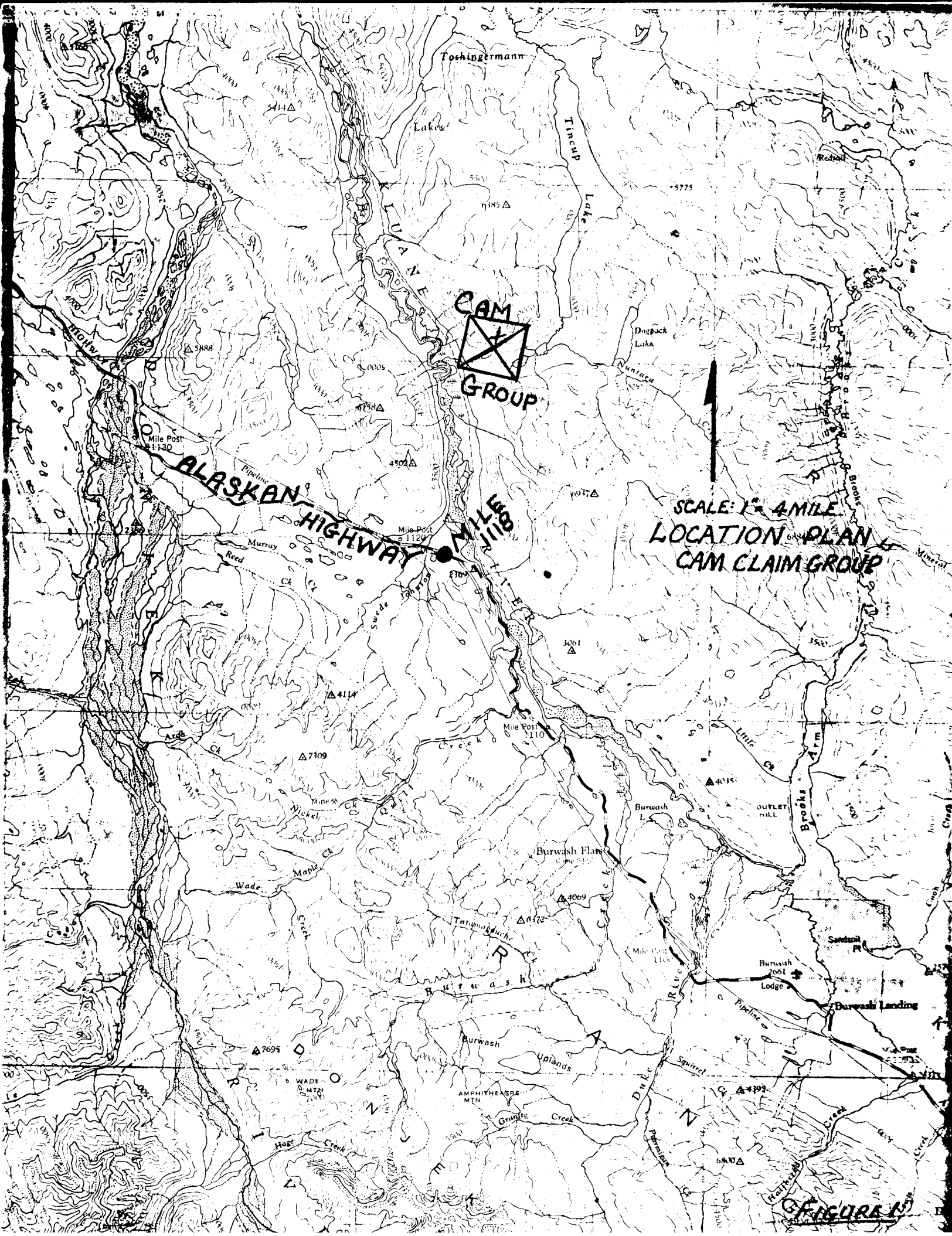
LABOUR:

D. Kasian Whitehorse	Supervisor	25 days @ $34/day	$ 850.00
K. Grothen Whitehorse	Magnetometer Operator & Linecutter	36 days @ $23/day	828.00
G. Mitchell Whitehorse	Magnetometer Operator	12 days @ $25/day	300.00
M. Herkel Whitehorse	Linecutter	25 days @ $21/day	525.00
T. Joe Burwash Landing	Linecutter	20 days @ $21/day	420.00
S. Johnson Burwash Landing	Linecutter	20 days @ $21/day	420.00
D. Johnson Burwash Landing	Linecutter	7 days @ $21/day	147.00
M. Johnson Burwash Landing	Linecutter	7 days @ $21/day	147.00
Magnetometer Rental:		25 days @ $10/day	250.00
Camp Costs:		152 man days @ $8/man day	1216.00
Transportation:			500.00
			$ 5603.00

SWORN BEFORE ME AT THE City of Whitehorse, in the Yukon Territory, this 27 day of August, A.D. 1969.

A Commissioner for Oaths for Yukon Territory

J. Mackie


CAM GROUP
ALASKAN HIGHWAY
Mile Post 1130
Mile Post 1120
Mile Post 1110
MILE 1118
Toshingermann Lakes
Tincup Lake
KLUANE
Dogback Lake
Nuntaca
Pipeline
Murray
Reed Ck
Swede Johnson
Nickel Ck
Maple Ck
Wade Creek
Quill Creek
Burwash Flats
Burwash Uplands
Burwash Landing
Burwash Lodge
OUTLET HILL
Little Ck
Brooks Creek
Squirrel Ck
Duke River
Granite Creek
Hoge Creek
Pleasant Ck
AMPHITHEATRE MTN
WADE MTN
SCALE: 1" = 4 MILE
LOCATION PLAN
CAM CLAIM GROUP
FIGURE 1

YUKON COMPLEX
ULTRA BASIC MASS.

ULTRABASIC MASS
YUKON COMPLEX

36W 32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E

76N 68N 60N 52N 44N 35N 24N 16N 8N 0 8S 16S

CAM 1 CAM 2 CAM 3 CAM 4 CAM 5 CAM 6 CAM 7 CAM 8 CAM 9 CAM 10 CAM 11 CAM 12 CAM 13 CAM 14 CAM 15 CAM 16 CAM 17 CAM 18 CAM 19 CAM 20 CAM 21 CAM 22 CAM 23 CAM 24 CAM 25 CAM 26 CAM 27 CAM 28 CAM 29 CAM 30 CAM 31 CAM 32 CAM 33 CAM 34 CAM 35 CAM 36 CAM 37 CAM 38 CAM 39 CAM 40 CAM 41 CAM 42 CAM 43 CAM 44 CAM 45 CAM 46 CAM 47 CAM 48

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ARROW INTER-AMERICA CORPORATION
CAM CLAIM GROUP - TINCUP LAKE AREA
WHITEHORSE MINING DIVISION
(CLAIM SHEET 115-G-11)
MAGNETOMETER SURVEY

SCALE: 1"=400' ; DATE: AUG 22, 1969 ; DRAWN BY: J.M.

TO ACCOMPANY REPORT BY J. MACKIE, P.ENG., ENTITLED:
"REPORT ON A MAGNETOMETER SURVEY ON THE CAM 1 TO 48 MINERAL CLAIMS OF ARROW INTER-AMERICA CORP."

— GEOLOGICAL CONTACT INFERRED FROM MAGNETOMETER SURVEY.

FIGURE 2