

GEOLOGICAL REPORT

MACAULEY CREEK SILVER - GOLD PROSPECTS
(Wheaton Project)

Ridge Mineral Claims #1 to #30 - situated along the southeast side of the upper part of MacAuley Creek, immediately north of the British Columbia border. Centred at latitude 60°0.5'N, longitude 135°18.3'W, Map Sheet 105D-3.



Whitehorse Mining Division, Yukon Territory

for

JOREX LIMITED

and

DOME EXPLORATION (CANADA) LTD.

by

J. R. Woodcock

June 25, 1973 to September 6, 1973

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

\$ 13,048.76

Resident Geologist or
Resident Mining Engineer

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

J. R. Woodcock Consultants
1521 Pemberton Avenue
Commissioner of Yukon Territory

North Vancouver, B. C.

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION - - - - -	1
LOCATION AND ACCESS - - - - -	1
CLAIMS AND OWNERSHIP - - - - -	2
GENERAL GEOLOGY - - - - -	2
MACAULEY CREEK MINERALIZATION - - - - -	3
MacAuley Creek East Prospect - - - - -	3
MacAuley Creek West Prospect - - - - -	4
CONCLUSIONS AND RECOMMENDATIONS - - - - -	6

APPENDIX

Claim Data

FIGURES

Fig. 1	Index Map	1a
1a	Claim Map - Ridge Group	2a
2	Ridge Claims - East Portion	In Pocket
3	Geology - MacAuley Creek East	In Pocket
4	Topographic Base Map - MacAuley Creek East	In Pocket
5	Geology - MacAuley Creek West	In Pocket
6	Topographic Base Map - MacAuley Creek West	In Pocket
7	X-Sections MacAuley Creek Prospect	In Pocket

WHEATON PROJECT -- MACAULEY CREEK PROSPECTS

INTRODUCTION

A large ring dyke, with diameter approximately 14 miles, occurs west of Bennett Lake in the Yukon Territory and adjoining part of British Columbia. This ring dyke appears to be central to many of the small gold - silver prospects of the Wheaton area and adjacent parts of Northern British Columbia and Yukon Territory. In 1972, the writer proposed that the area within this ring dyke, which had no known mineral occurrences, be investigated for gold - silver deposits by using stream geochemistry and by checking gossan zones.

A few days work late in 1972 led to the discovery of high grade float on a moraine southeast of MacAuley Creek. After assays of this material were obtained, prospectors returned to the area to stake some claims. Poor weather and the rugged topography prevented proper appraisal of the zone in 1972.

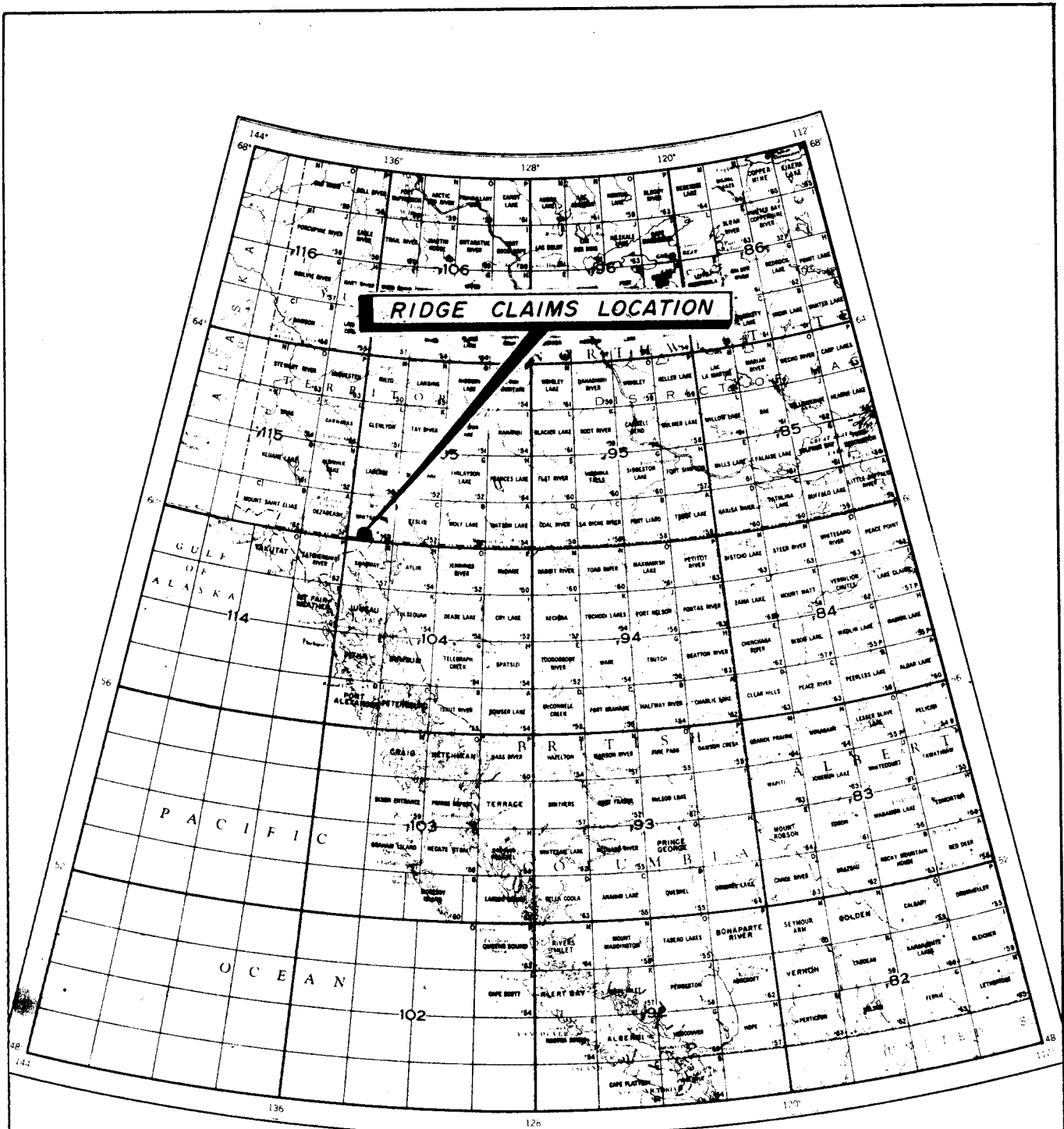
In 1973 a program of prospecting, surveying, mapping, trenching and sampling was carried out in July and early August. This was done by a six-man crew which included J. R. Woodcock, senior geologist and director; A. J. Audet, field geologist and surveyor; N. Wychopen, prospector; G. Smaill, professional mountain climber; R. Beaton and H. Hong, student assistants. A transit and stadia survey of the rugged topography was made by A. J. Audet and R. Beaton to establish survey stations and a topographical map which could be used for the geological mapping. The geological mapping was done by J. R. Woodcock and A. J. Audet. G. Smaill was employed in placing safety ropes and in belaying workers. N. Wychopen, R. Beaton, G. Smaill, did the trenching and some of the sampling and H. Hong did miscellaneous work. All employees are from Vancouver; mailing address is 1521 Pemberton Avenue, North Vancouver, British Columbia.

The investigation involved two mineralized vein zones; one at the head of a cirque on the east side of "The Ridge" and one on the west side of The Ridge adjacent to the MacAuley Creek valley. For the work on the MacAuley Creek East prospect, a camp was established on a plateau about one mile southwest of the prospect and the men had to climb 1000 feet from this plateau, walk along a ridge and then descend to the mineralized area. This prospect is in the broken southwest wall of a cirque. Although the cirque was much closer to the prospect, access was impossible from this side because of steep cliffs and falling debris. For mapping the MacAuley Creek West prospect a camp was established along MacAuley Creek.

LOCATION AND ACCESS

The claim group is along the southeast side of the upper part of MacAuley Creek, immediately north of the British Columbia border. It is centred at latitude 60°0.5'N, longitude 135°18.3'W, Map Sheet 105D-3. Elevations on the claim group vary from 4500 feet to 7000 feet.

Access at present is by helicopter (0.3 hours by Jet Ranger from



WHEATON PROJECT
 LOCATION MAP
 MacAuley Creek Area
 J.R.WOODCOCK CONSULTANTS LTD

Figure No - 1

Whitehorse). Carcross, a small town on the White Pass and Yukon Railway, is 25 miles northeast of the property. The west arm of Bennett Lake is seven miles down MacAuley Creek in a northeasterly direction.

CLAIMS AND OWNERSHIP

In 1972, 14 claims were staked in an attempt to cover the inaccessible source of the high grade float. This was done to a large extent by witnessing the No. 2 Post up into the inaccessible cliffs. In 1973, an additional 16 claims were staked to complete coverage of the showing and to cover the newly discovered west prospect.

All these claims have been transferred to Adastral Mining Corporation Limited. The property is under option by Jorex Limited and Dome Exploration (Canada) Ltd. The work done in 1973 was for Jorex Limited and Dome Exploration (Canada) Ltd.

The claim data is shown in the appendix.

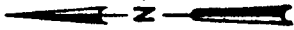
GENERAL GEOLOGY

The Bennett Lake ring dyke structure occurs within the northeastern edge of the Coast Crystalline Complex along the southern boundary of the Yukon Territory and the adjacent part of British Columbia. It has been mapped by J. O. Wheeler on the Whitehorse map sheet, and by R. L. Christie, on the adjacent Bennett map sheet of British Columbia. Wheeler has assigned an age of "Tertiary or earlier" to this intrusion of granite porphyry and rhyolite.

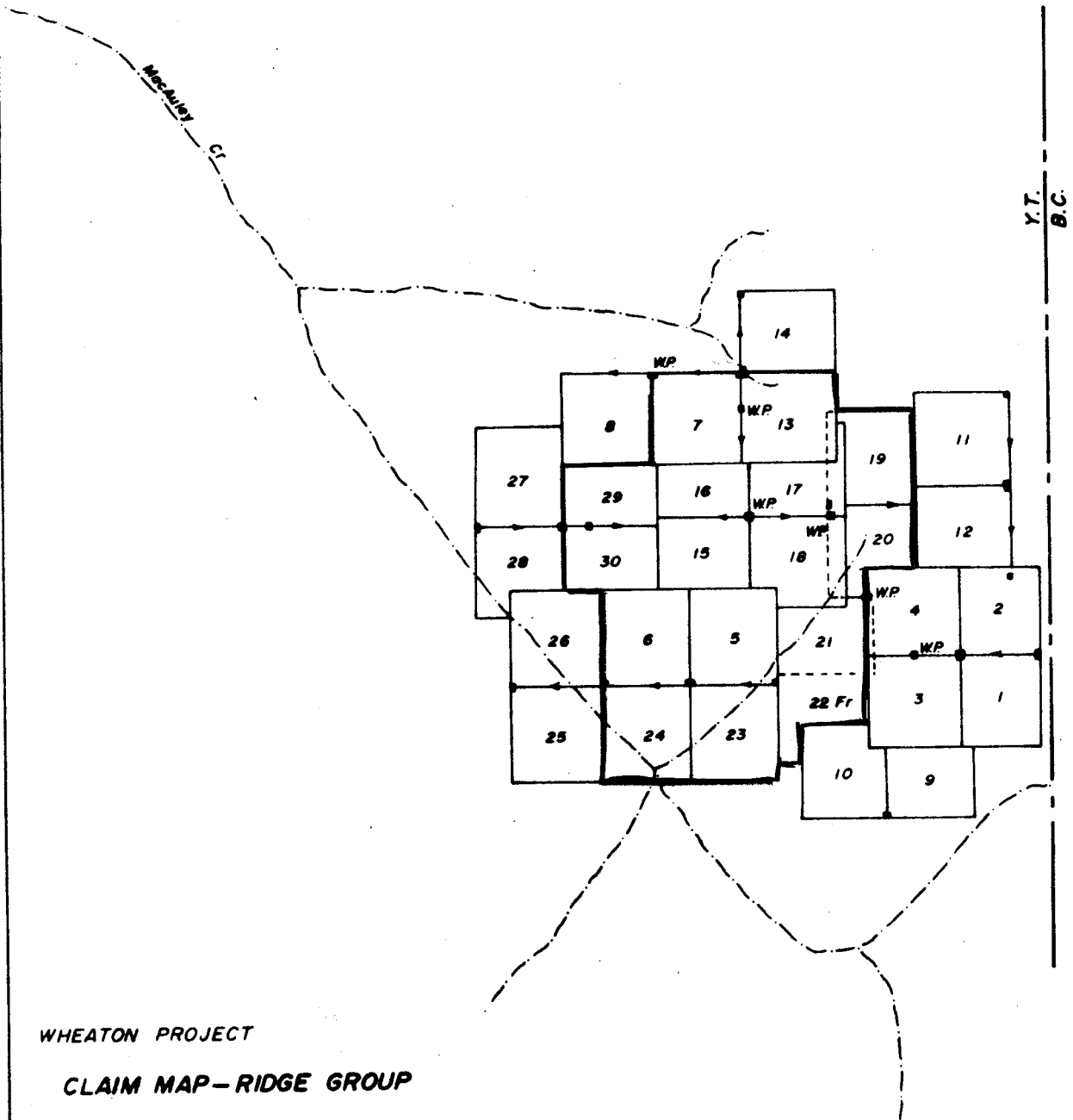
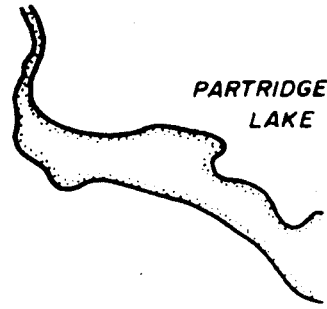
Occurring within this ring dyke and also on Mt. Skukum, about 15 miles to the north, is a group of Tertiary or earlier volcanic rocks called the Skukum Group. M. B. Lambert mapped the Skukum Group within the ring dyke and published "A Study of Tertiary Cauldron Subsidence Complex, Bennett Lake, British Columbia and Yukon Territory", in Report of Activities, 1968. He states that "This is a presumed cauldron subsidence area with a history of explosive acidic volcanism and rapid sedimentation that resulted in the accumulation of great thicknesses of tuffs, breccias, ignimbrites and conglomerates.

"Granitic and metamorphic rocks completely surround the layered rocks of the Skukum Group in this region. Isolated masses of pre-Mesozoic metamorphic rocks consist of quartz-feldspar schists and gneisses, quartz-biotite schists, quartzites and gneissic granodiorite. These rocks are shattered and brecciated in the vicinity of known fault zones, generally around the periphery of central volcanic rocks, and in breccia pipes." One unusual type of intrusive breccia consists of many granitic fragments within a volcanic matrix occurring in dykes.

"Early products of explosive volcanism which include a variety of light-coloured breccias and tuffs, accumulated on an irregular granitic terrain to a maximum thickness of about 1500 feet. The late products of this series form a sequence of ignimbrites with a maximum thickness of 2000 feet.



PARTRIDGE
LAKE



WHEATON PROJECT

CLAIM MAP - RIDGE GROUP

J.R. WOODCOCK CONSULTANTS LTD.

Scale 1" = 1/2 mile

Aug. 1973

Figure No-1a

"Tuff and breccia pipes, composite tuff-rhyolite and tuff-dacite dykes, and ignimbrite dykes are considered to be the sources of the pyroclastic rock. During a period of erosion following the explosive eruptions, a sequence of essentially unsorted granitic boulder conglomerates accumulated to thicknesses as great as 1000 feet in the southeast corner of the area. In the central parts of the area, the conglomerate beds interfinger with tuff and ignimbrite units."

The present writer would add that the felsite unit, mapped in the central part of the area, underlies the pyroclastic rocks and is probably an intrusive. Dykes of similar rock cut the overlying volcanics and dyke-like extensions extend from the felsite horizon a short distance upward into the volcanics. In places the felsite of the dykes has small quartz phenocrysts. Similar felsite rocks occur in the vicinity of the gold prospects around Mt. Skukum.

Numerous faults occur throughout the central part of the area and short discontinuous gossan zones occur along these faults.

Near the northern part of the ring dyke, a breccia pipe within the volcanic sequence contains considerable altered and pyritized rock. Some of this altered rock may be granite porphyry similar to that in part of the ring dyke. This brilliant small gossan zone has been sampled with silts and rocks but no anomalous metal values could be found.

The granitic terrain to the west and south of the volcanic sequence weathers a rusty colour and probably contains more than the normal amounts of pyrite.

In addition to the widespread small gossan zones, there are veins and stringers that contain sulphides such as arsenopyrite and galena. The only extensive vein system found is on the ridge southeast of MacAuley Creek. It is covered by the Ridge claim group.

MACAULEY CREEK MINERALIZATION

Two main vein systems occur in this area and have been called the "MacAuley Creek East" and the "MacAuley Creek West" prospects. In both places, vein systems strike almost due north and dip generally over 80°.

MacAuley Creek East Prospect

A conspicuous gossan area up to 300 feet wide and about 800 feet long occurs in the steep hillside and cliffs at the southwest corner of a rugged cirque. Drainage from this cirque is northwesterly to MacAuley Creek. In 1972, mineralized float was found on some old lateral moraines within the cirque and creek valley. Following the float upstream showed that it came from the almost inaccessible gossan area. This float was greenish-yellow in colour (from scorodite and jarosite). Some of it contained galena and/or arsenopyrite and carried silver and gold values.

High vertical cliffs bound the mineralized or gossan area on the southwest and on the northeast, and steep cliffs of volcanic rock drop away from the bottom of the mineralized area into the cirque to the east. To the west of the mineralized area the volcanic rocks are highly shattered and form smaller cliffs with abundant talus areas.

Mapping in 1973 showed that the gossan area is composed of two complex sub-parallel mineralized zones separated by some talus. This talus probably covers fractured and slightly altered volcanic rock.

The Upper Zone dips 70° to 90° east. It consists largely of altered volcanic rock which in places is replaced by fine-grained silica and some sulphides. Fluorspar occurs in this silicified zone, mainly as linings of drusy cavities. Adjacent to and within this silicified Upper Zone patches of the volcanic rock have been altered to a purple rock cut by a stockwork of fine-grained quartz veinlets. Sulphides within the silicified zone are erratically distributed and consist mainly of widely scattered pyrite, arsenopyrite concentrated into discontinuous zones and some erratically distributed galena. Oxidation has converted most of the pyrite and arsenopyrite to jarosite plus scorodite.

The silicified mineralization of the Upper Zone is quite persistent and the zone has been found at the head of another cirque 300 feet north of the mapped area (Station S-47) and also in the pass 600 feet southwest of the mapped area.

The Lower Zone dips 60° to 90° east. It is separated from the Upper Zone by a talus-covered area which probably is underlain by fractured volcanic rocks. Most of this zone is composed of the silicified and slightly mineralized rock; some is composed of the purple volcanics cut by quartz stockwork; parts are composed of fairly resistant brown volcanic rock. Areas of abundant scorodite - arsenopyrite, in places over 10 feet wide, strike northerly through the northern part of the Lower Zone. Concentrations of galena occur in narrow, slab-like veins, generally within the scorodite-rich areas. Mineralization and alteration of volcanic rocks appears to be quite poddy and discontinuous both in amount of mineralization, structure, etc.

The Lower Zone seems to be faulted on the north under some vertical cliffs. On the south it appears to bend to the southwest and extend, along with the Upper Zone, in a southwesterly direction under the snow cover.

Thus both the Upper and the Lower Zones generally strike northerly and are separated by about 100 feet of volcanic rock. To the south, both zones curve to the southwest and start to converge. Just before they disappear under the snow and talus, they are only 30 feet apart. The best mineralization occurs on the widened northerly part of these zones. Possibly this has something to do with the flexure.

MacAuley Creek West Prospect

The MacAuley Creek West Prospect consists of a north - south zone of parallel and sub-parallel veins and mineralized structures which has

been traced for 1400 feet along the west side of the mountain. This zone extends to the overburden on the south and on the north and parallel veins have been found adjacent to the talus slope on the west side of the rock exposures.

In contrast to the MacAuley Creek East Prospect where the volcanic rocks are fractured and the silicified zones stand up as resistant knobs, the volcanic rocks on the MacAuley Creek West Prospect are fairly resistant and the mineralized veins weather out to form vertical-sided canyons or guts which cross through the rugged cliffs.

The rock types of the MacAuley Creek West Prospect consist mainly of two formations. The high cliffs are composed of a grey, hard, glassy tuffaceous formation which is underlain, and probably intruded by a rusty-weathering, white felsite. Small dyke-like projections of this underlying felsite extend short distances up into the overlying grey rock. In places the grey volcanic rock is cut by persistent vertical felsite dykes. Some of the felsite within dykes contains small quartz phenocrysts. There appears to be a zone of leaching and minor pyritization (rusty zone) at the lower part of the grey volcanic horizon immediately above its contact with the underlying felsite. Whether this is related to intrusion of the felsite or whether it is a subsequent structure controlled by some faulting along the contact is not certain.

This vein system has been mapped over a width of 200 feet in the grey volcanics and an additional 100 feet in the underlying felsites which are exposed between the high rugged volcanic cliffs and the bounding talus slopes to the west. Additional parallel or sub-parallel veins occur for at least 400 feet to the east in the very high rugged parts of the mountain. However these have not been examined or mapped; their presence is attested by the mineralized float which occurs on the talus coming out of the canyon-like clefts.

Most of the mineralized structures mapped are complex in that they occur en echelon along parallel zones of fractures, or they are branching along sub-parallel zones. Most structures strike almost due north and dip over 80°.

The structures actually consist of altered rock along fractures which, in places, contain continuous, narrow vertical vein-like zones of arsenopyrite mineralization. Arsenopyrite can form 50% of the vein material over widths up to three feet. This type of mineralization, with an average width approximately one foot, can be traced continuously for distances of over 200 feet within the mineralized structures. Concentrations of galena occur occasionally on the outer parts or adjacent to these mineralized structures. The altered volcanics weather an orange colour from the minor disseminated pyrite. Little stringers of galena or of arsenopyrite can occur within this altered zone.

The drusy quartz-fluorspar mineralization was only noted in one place and this was along a fault structure which cuts the grey volcanics southwest of Station C-25.

A persistent grey dyke with vertical attitude strikes north - south through the zone. It is mostly four to six feet wide, less fractured and more resistant than the enclosing volcanic rocks and

forms vertical cliffs. Where the mineralized structures and the arsenopyrite veins intersect this dyke there is a complexity which has not been sorted out. The dyke appears faulted at such intersections and also, in places, altered. This dyke may be pre-mineralization.

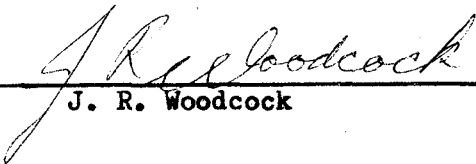
CONCLUSIONS AND RECOMMENDATIONS

1. A sequence of volcanic rocks of probable Tertiary age and consisting largely of tuffaceous formations, generally lacking good visible bedding occur within the ring dyke structure or cauldron subsidence west of Bennett Lake.
2. In the area of mapping on the Ridge claims, this grey volcanic sequence is underlain and probably intruded by a white, rusty-weathering felsite.
3. Two vein systems have been found and mapped; one occurs in the cirque walls on the east side of the ridge, and one occurs at the foot of the steep cliffs on the west side of the ridge. Both vein systems are steeply-dipping to vertical and strike almost due north.
4. Mineralization and structure of the East system is different than that of the West system. The East system consists of two zones which strike almost parallel and are separated by about 100 feet of fractured volcanic rock. Both zones consist largely of silicified volcanic rock carrying sulphides and, in places, minor fluorite-lined drusy cavities. These zones also include areas of altered purple volcanics cut by quartz stockwork. In places there are concentrations of arsenopyrite in vein-like or irregular structures parallel or sub-parallel to the main zones. Also, there are galena concentrations over small widths, generally less than four inches.
5. The MacAuley Creek West Showing consists of a set of parallel, en echelon, or branching narrow zones of altered grey volcanic rock. Within these altered zones are narrow (generally under two feet) veins of quartz - arsenopyrite. Similar veins also occur in places within the underlying felsite formation.
6. Interesting gold and silver values have been obtained in some of the samples of the float and in some of the vein material only on the MacAuley Creek East Prospect. The veins of the MacAuley Creek West Prospect are almost barren.
7. Whether or not the surface samples have been leached or enriched in precious metals is not known. The writer suggests that the surface sampling should give an order-of-magnitude of the amount of precious metals and that sufficient encouragement from such surface sampling would be needed before underground or diamond drilling work could be recommended.

The experience of the 1973 mapping program shows that blasting and trenching with use of a Cobra drill is not effective in getting

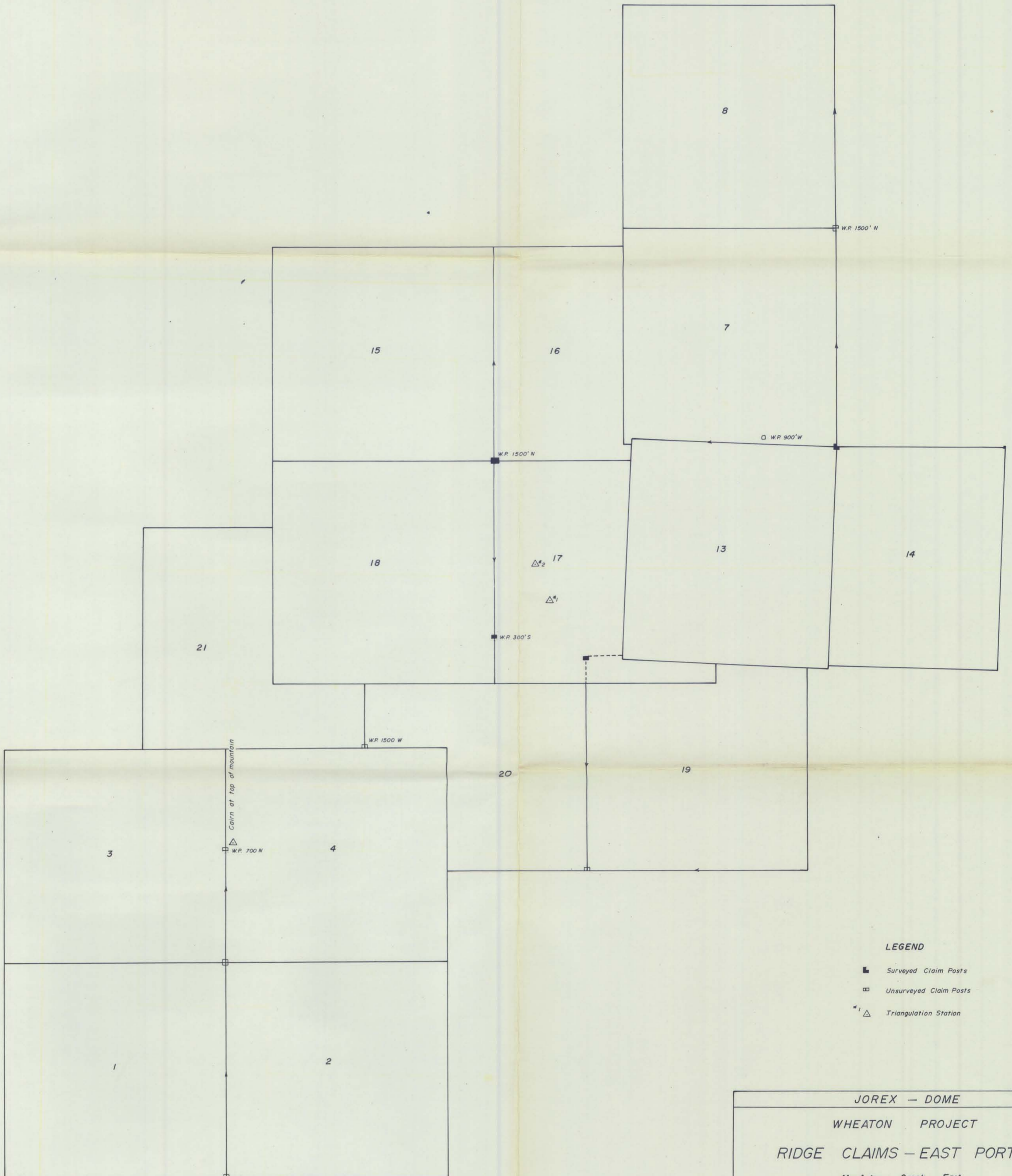
down to fresh unfractured rock. The fracturing of the mineralized zones, etc. on these steep slopes probably extends for several tens of feet.

8. Because of the inaccessible location, encouragement must be obtained with mapping and surface sampling of the mineralized zones before physical work such as diamond drilling or an exploration adit is warranted.



J. R. Woodcock

September 6, 1973



LEGEND

- Surveyed Claim Posts
- Unsurveyed Claim Posts
- △¹ Triangulation Station

JOREX — DOME
WHEATON PROJECT
RIDGE CLAIMS — EAST PORTION
MacAuley Creek East

Scale 0 400 800 feet

J.R. WOODCOCK CONSULTANTS LIMITED

Survey by - A. Audet July 17- 25 1973



7
WF 900' W
13
RIDGE

RIDGE 7

RIDGE 13

RIDGE 16

RIDGE 17



LEGEND

- Talus and soil, moraine
- Silicified zones with abundant arsenopyrite and/or galena
- Area of volcanic rock mixed silicified and purple
- Bleached and/or silicified zones, some arsenopyrite
- Purple altered volcanic rock with quartz stockwork
- Felsite - some with quartz phenocrysts possibly intrusive some dykes
- Brown volcanic rocks - quartz phenocrysts
- Acid to intermediate volcanic rocks - mainly coarse tuffs
- Prominent fracturing
- Stadia station
- Topographic contour
- Formation contact
- Probable fault
- Trench

NOTE - North determined using declination 30°-30 east

JOREX - DOME
WHEATON PROJECT
GEOLOGY
 MacAuley Creek - East

40 20 0 20 40 80 feet
 CONTOUR INTERVAL = 20'

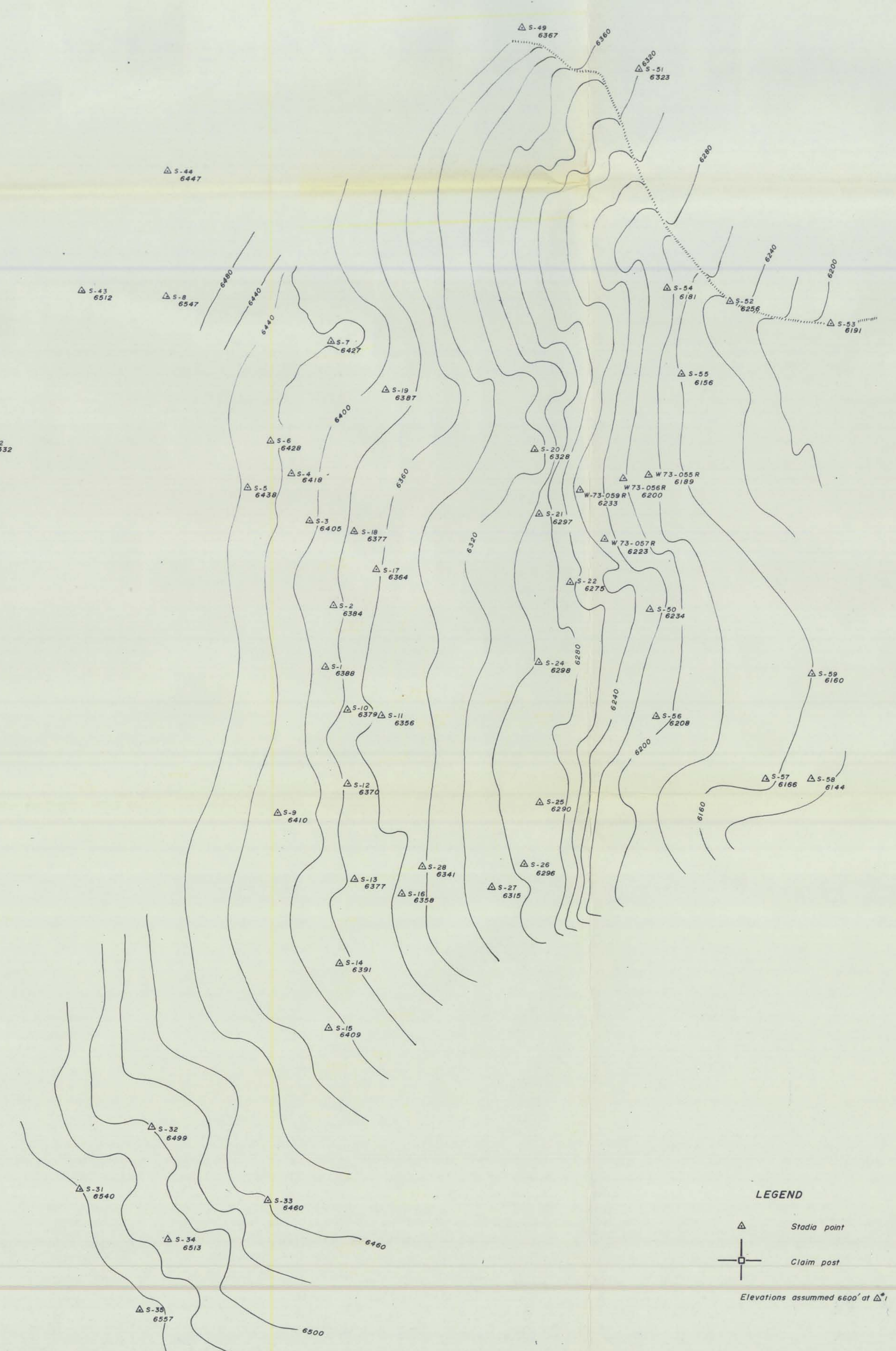
JR WOODCOCK CONSULTANTS LIMITED

Mapped by - J.R. Woodcock & A.J. Audest 1973 Figure No. - 3

J.R. Woodcock



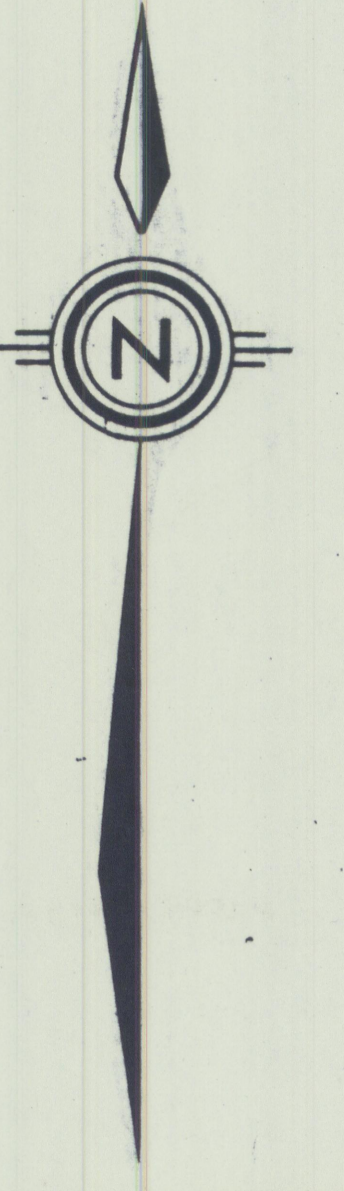
7
W.P. 900'
— □ — RIDGE
13



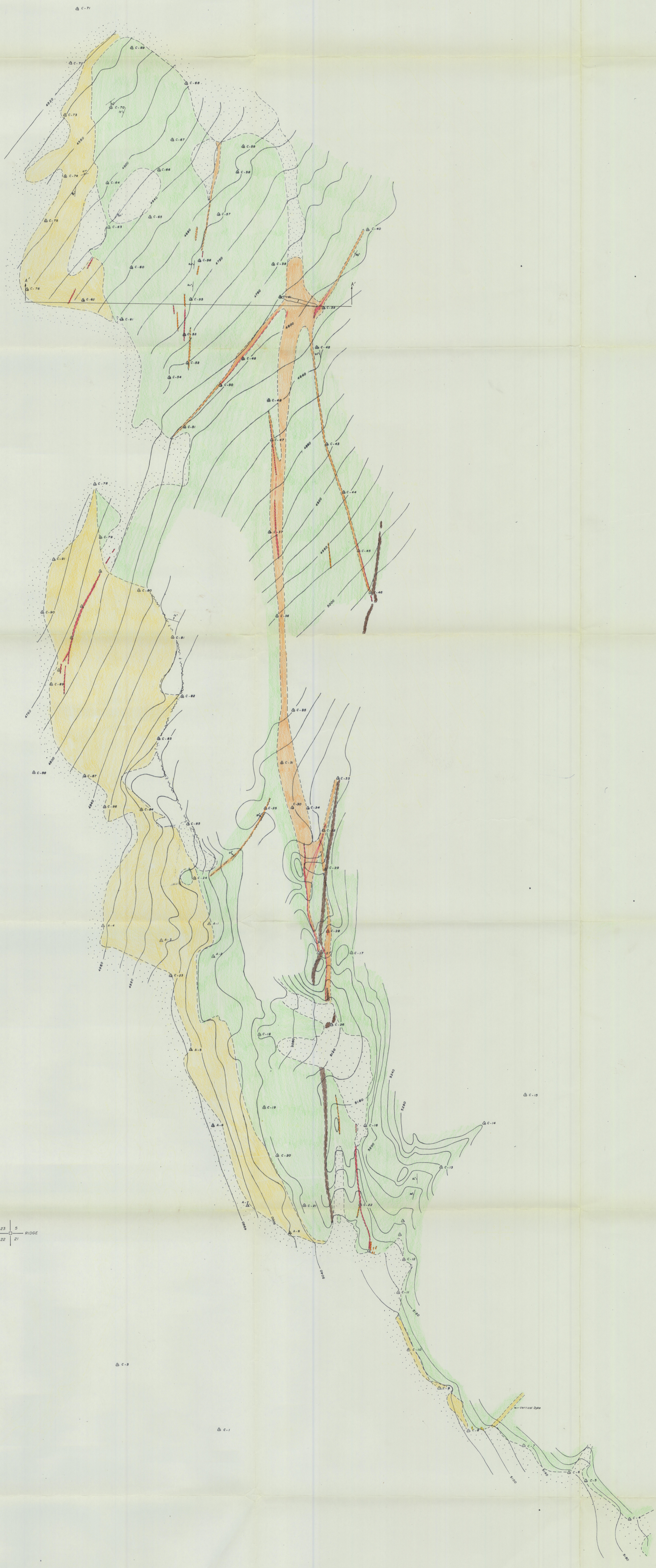
LEGEND
△ Stadia point
□ Claim post
Elevations assumed 6600' at Δ 1

JOREX — DOME
WHEATON PROJECT
TOPOGRAPHIC BASE MAP
MacAuley Creek — East
40 20 0 20 40
Scale
CONTOUR INTERVAL = 20'
J.R. WOODCOCK CONSULTANTS LIMITED
Mapped by: J.R. Woodcock & A. Auler 1973 Figure No. — 4

J.R. Woodcock



24 6
23 5
RIDGE



Δ C-77

Δ C-82

Δ C-18

Δ C-1

23 5
22 21
RIDGE

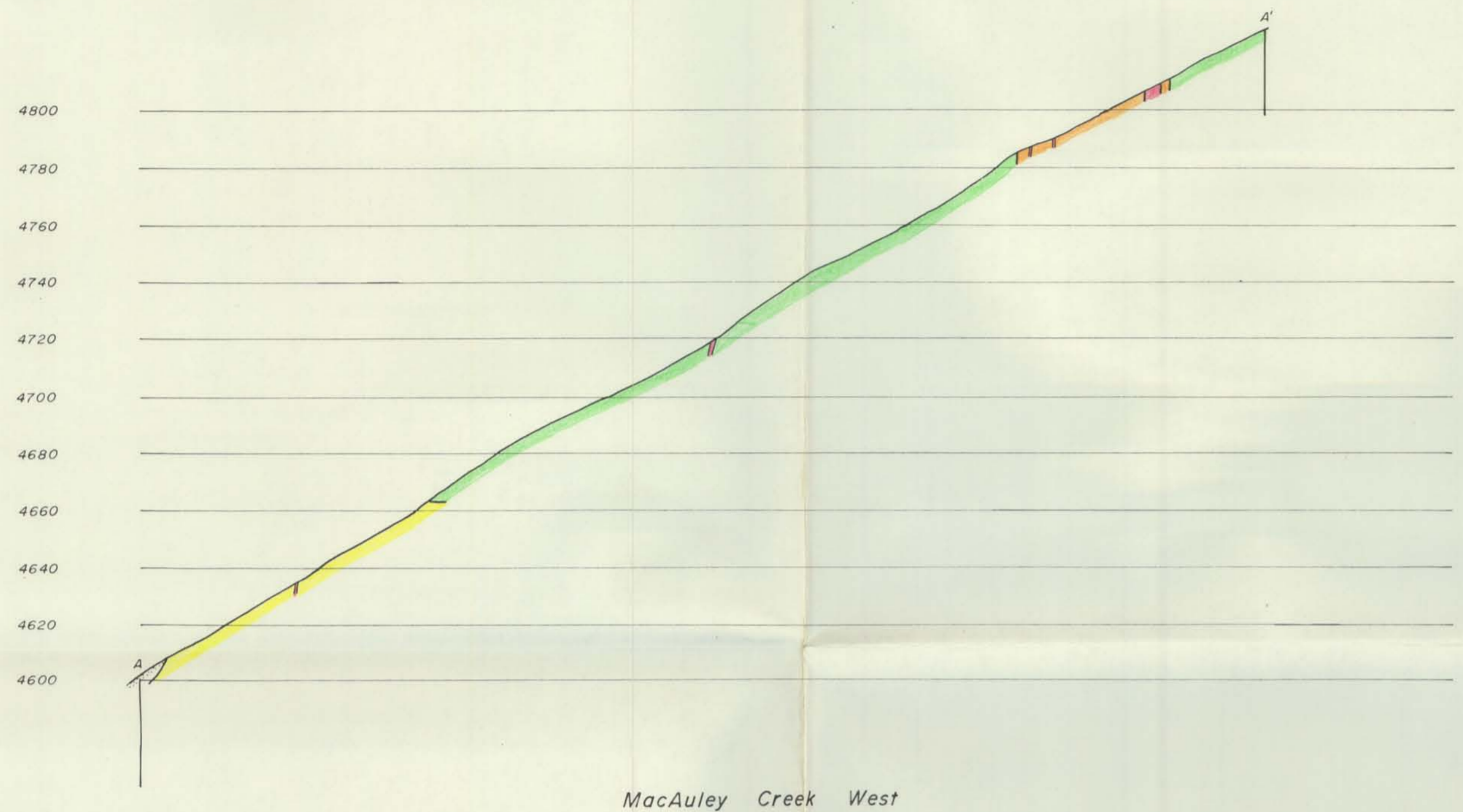
- LEGEND**
- Talus soil and moraine
 - Sulfidized zones with abundant arsenopyrite and/or pyrite
 - Bleached and/or silicified zones, some arsenopyrite
 - Grey dyke
 - Felsite - some with quartz phenocrysts, possibly intrusive; some dikes
 - Acid to intermediate volcanic rocks - mainly coarse rhyolite
 - Trench
 - Prominent fracturing
 - Fault
 - Probable fault
 - Fault attitude
 - Topographic contour
 - Formational contact
 - Claim post
 - Station post
- Elevation assumed floor of Δ C-1
North determined using declination 30° 30' 2017

JOREX - DOME
WHEATON PROJECT
GEOLOGY
McAuley Creek - West

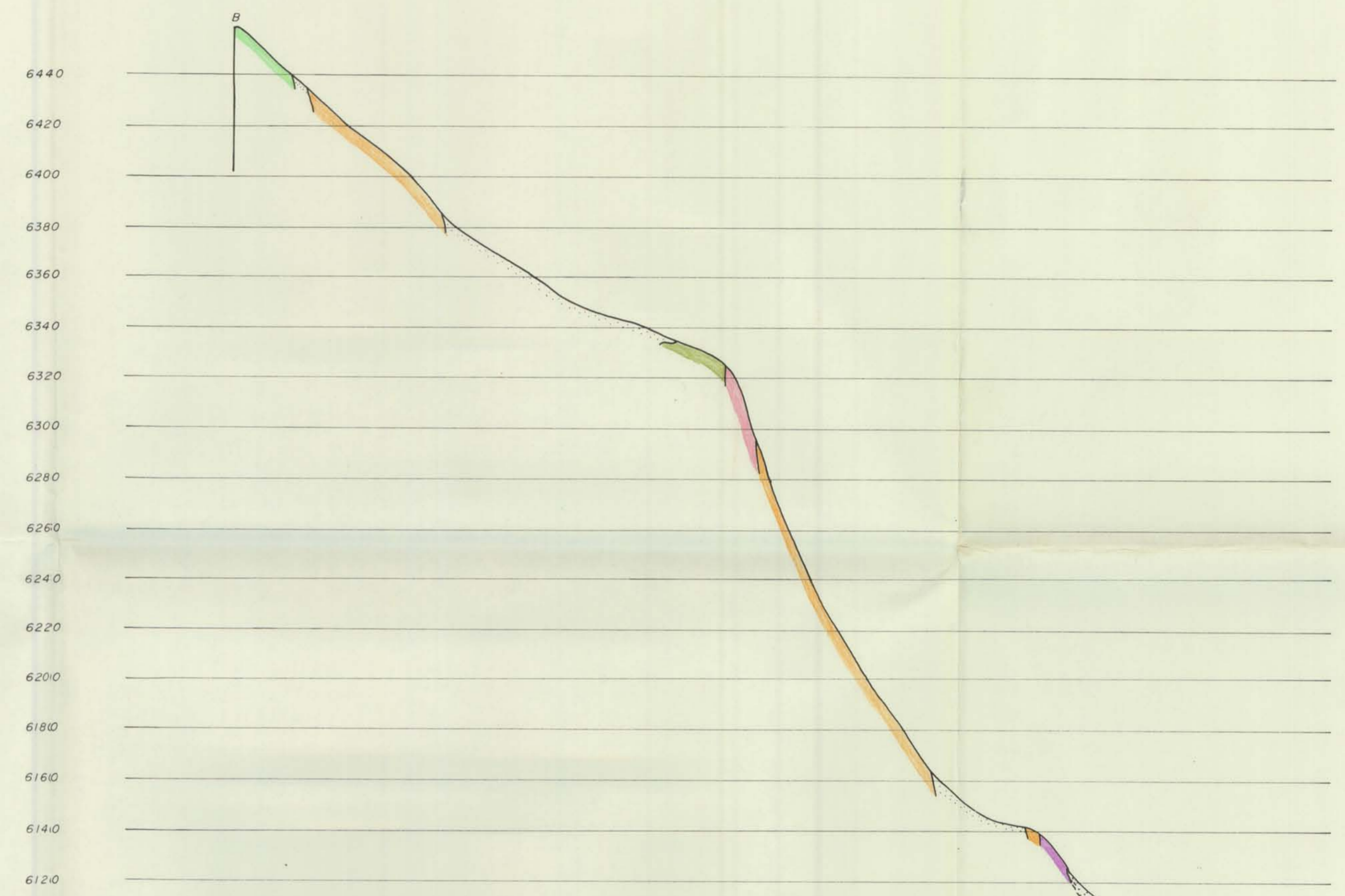
Scale 1:50,000
CONTOUR INTERVAL: 20'

J.R. WOODCOCK CONSULTANTS LIMITED
1973 Figure No. 2

J.R. Woodcock



MacAuley Creek West



MacAuley Creek East

Note - Legend is the Same as Geological Maps

JOEX — DOME	
WHEATON PROJECT	
X-Sections	
MacAuley Creek Prospects	
 SCALE	
J.R. WOODCOCK CONSULTANTS LIMITED	
Sept 1973	Figure No-7