GEOLOGY AND PHOTOGEOLOGY

OF THE

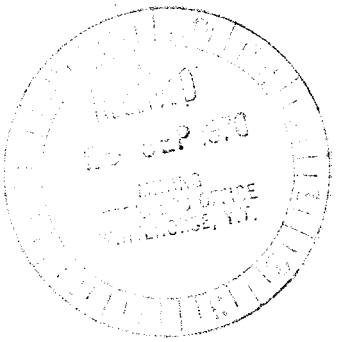
GOAT CLAIMS, STEELE CREEK AND GLACIER REGION, YUKON.

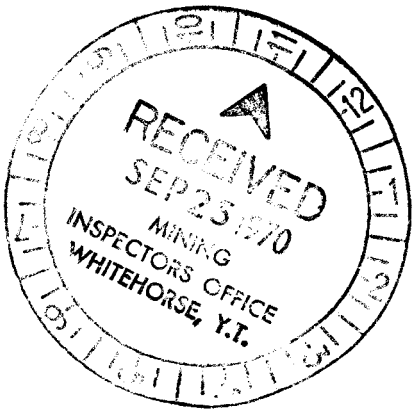
BY

W.R. NEWMAN, PH.D., P. ENG.

SEPTEMBER 22ND, 1970

VANCOUVER, B. C.





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

$ 1437.01

D. F. Craig

Resident Geologist or
Resident Mining Engineer

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

Commissioner of Yukon Territory

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GOAT CLAIMS, STEELE CREEK AND GLACIER REGION, YUKON.

INTRODUCTION

FOURTEEN CLAIMS ARE HELD BY NEWMAR EXPLORATIONS LTD. IN THE STEELE GLACIER REGION, 36 MILES SOUTHWEST OF BURWASH LANDING AT MILE 1093 ON THE ALASKA HIGHWAY. AN AIRSTRIP IS LOCATED 2 MILES NORTH OF BURWASH LANDING. FLOAT PLANES CAN ALSO LAND ON KLUANE LAKE AND HELICOPTERS, AVAILABLE FOR CHARTER ARE BASED AT BURWASH LANDING, AND ARE THE MOST SUITABLE METHOD FOR EXPLORING AND TRAVEL IN THE FIELD. WHITEHORSE, SERVICED BY C.P. AIR, IS ABOUT 180 MILES IN A DIRECT LINE SOUTH OF EAST OF THE REGION. FOUR-WHEELED POWERED VEHICLES CAN NOW GO FOR A DISTANCE OF ABOUT 10 MILES ALONG BURWASH CREEK, SOME 23 MILES FROM THE CLAIMS.

THE WRITER PROSPECTED AND EXAMINED THE CLAIMS AND THE GENERAL AREA ON JULY 2ND AND 3RD, 1970, AND MAPPED THE PROPERTY ACCOMPANIED BY T. SADLER-BROWN. PHOTOGEOLOGICAL STUDIES WERE MADE BY T. SADLER-BROWN FROM STEREO-PAIRS AND ENLARGED MOSAICS OBTAINED FROM THE NATIONAL AIR PHOTO LIBRARY AT OTTAWA.

UNFORTUNATELY, THE SIGNIFICANT CLAIMS 1 AND 2, WERE SNOW-COVERED AND CLAIMS 3 AND 4 PARTIALLY SO, AT THE TIME OF VISIT.

CLAIMS

NAME	GRANT NUMBER
GOAT 1 - 14	Y35734 TO Y35747

THE CLAIMS ARE IN GOOD STANDING UNTIL JULY 21, 1971.

HISTORY

THE GEOLOGY OF THE AREA WAS STUDIED IN 1941 BY R.P. SHARP OF THE AMERICAN GEOGRAPHICAL SOCIETY, WHO REPORTED PRESENCE OF MOLYBDENUM AND CHALCOPYRITE IN A PORPHYRITIC BIOTITE GRANITE IN INTRUSIVES ALONG STEELE CREEK. A NUMBER OF MINING COMPANIES LATER EXPLORED THE AREA AND FOUND INDICATION OF MOLYBDENUM MINERALIZATION IN A NUMBER OF LOCALITIES. THE AREA HAS BEEN MAPPED BY THE GEOLOGICAL SURVEY OF CANADA AND MAP AND REPORT WERE COMPLETED IN 1967 ON THE GLACIATION HISTORY AND GEOLOGY OF THE REGION.

THE WRITER HAD VISITED THE AREA FOR 3 DAYS DURING 1966 AND AGAIN IN 1969.

TOPOGRAPHY

THE AREA LIES IN THE DONJEK RANGE OF THE ICEFIELD RANGES OF THE ST. ELIAS MOUNTAINS IN ONE OF THE MOST RUGGED AND SPECTACULAR MOUNTAIN RANGES ON THE CONTINENT. STEELE CREEK VALLEY IS A BROAD GLACIAL U-SHAPED VALLEY, THE CREEK FLOWING OUT OF THE STEELE GLACIER.

THE CLAIMS ARE LOCATED NEAR A RIGHT ANGLE BAND OF THE GLACIER. STEELE GLACIER RECEIVED WORLD-WIDE PROMINENCE IN 1966 WHEN IT WAS DISCOVERED THAT THE GLACIER WAS FLOWING AT AN UNPRECEDENTED SPEED. THE FLOOR ELEVATION ON THE VALLEY VARIES FROM 3,500 TO 6,500 FEET. THE SLOPES OF MOUNTAINS HAVE NO FOREST COVER, VARIETIES OF GRASS, MAINLY BUNCH-GRASS, GROUND BIRCH AND WILLOWS, COVERING THE SLOPES TO 5,000 FEET IN ELEVATION. NUMEROUS GOATS AND SHEEP WERE SEEN IN THE HIGH ALPINE MEADOWS; THE AREA NOW BEING A GAME RESERVE. THE CLAIMS ARE LOCATED ON THE GRASSY SLOPES OF A MOUNTAIN PEAK CAPPED AND FRINGED BY SMALL GLACIERS. A NUMBER OF SMALL INDENTED VALLEYS ARE COVERED WITH TALUS AND BOULDERS.

GEOLOGY

THE CLAIMS ARE UNDERLAIN WITH LIGHT GREEN CHLORITIC SCHISTS, PHYLLITES IN THE NORTHERN PORTION OF THE CLAIMS ON THE LOWER SLOPES AND MODERATELY COARSE-GRAINED QUARTZ FELDSPAR PORPHYRY AND ALASKITE IN THE SOUTHERN MOUNTAINOUS PART. THE GRANITIC ROCKS HAVE BLUE-GREY QUARTZ EYES AND CONTAIN CONSIDERABLE DISSEMINATED PYRITE. WHEN ROCK IS EXPOSED THE ROCK HAS BEEN AND STAINED ON SURFACE A LIGHT YELLOW-BROWN COLOR. TALUS OFTEN HAS A LEMON-YELLOW STAIN ON THE MINERALIZED ROCK. THE INTRUSION BELONGS TO THE DONJEK RANGE OR ICEFIELD RANGE INTRUSIONS OF CRETACEOUS OR TERTIARY AGE. THE GRANITE ROCKS CONTAINED CONSIDERABLE QUARTZ AND POTASH FELDSPAR (ORTHOCLASE, MICROCLINE, ETC.)

ON THE LOWER SLOPES OF THE CLAIMS, ROCKS PREDOMINANTLY SEDIMENTARY ROCKS WITH SOME VOLCANICS WITH LOW GRADE METAMORPHISM HAVE BEEN MAPPED. THESE ARE LARGELY LIGHT TO DARK GREEN SLATES, SCHISTS WITH MASSIVE GREENSTONE WITH THE COLOUR DUE TO CHLORITE AND ACTINOLITE. LIGHT GREEN PHYLLITES WITH GOOD SCHISTOSITY AT AN ANGLE TO THE BEDDING-PLANE ARE COMMON. THEY STRIKE 68 - 70 DEGREES AND HAVE AVERTICAL DIP. THE CALCAREOUS SERICITE-CHLORITE SCHISTS ARE METAMORPHOSED VARIEITES OF SEDIMENTS DEPOSITED IN THE EUGEOSYNCLINE.

MINERALIZATION

CONSIDERABLE DISSEMINATED PYRITE IS FOUND IN THE QUARTZ PORPHYRY, PORPHYRITIC GRANITE AND MONZONITE. MOLYBDENITE HAS BEEN FOUND ON THE CLAIMS AND SHOWN ON MAP 1177A GEOLOGICAL SURVEY OF CANADA, WHERE A HIGHLY SILICIFIED, PYRITIZED GRANITE CONTAINING SOME CHALCOPYRITE AND MOLYBDENITE HAS BEEN REPORTED. IN 1966, DURING THE EXAMINATION OF THE GROUND, A SAMPLE OF QUARTZ AND SILICIFIED ROCK, ASSAYED .14 OUNCES OF GOLD PER TON. SILVER ASSAYS OF .05 AND .10 OUNCES HAVE ALSO BEEN ASSAYED IN THE PORPHYRIES. DURING EARLY OF JULY 1970, THE UPPER PART OF THE CLAIMS WERE SNOW-COVERED AND IT WAS NOT POSSIBLE TO SEE THE REPORTED MOLYBDENUM OCCURENCE. AT NORTH END OF CLAIM 4, A 2' QUARTZ VEIN OR BOULDER WAS EXPOSED WITH A STRIKE OF 30 DEGREES AND A DIP OF

55 DEGREES TO THE NORTHWEST IN A PHYLLITE INLIER. THE QUARTZ WAS DARK GREY COLOUR WITH NO SULPHIDE. THE ASSAY REVEALED NO SIGNIFICANT GOLD CONTENT. THE PORPHYRY HAS CONSIDERABLE BROWN COLORATION DUE TO IRON WEATHERING.

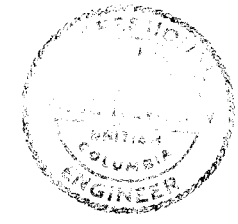
STRUCTURE

WITH THE PROFOUND DIFFERENCE IN APPEARANCE BETWEEN THE HIGH, STEEP, CLIFF-LIKE MOUNTAINS, CONSISTING OF STRIKING HORIZONTAL-BEDDED VOLCANICS, MAINLY ANDESITES, TO THE NORTH OF THE STEELE CREEK AND GLACIER, TO THE MORE ANGULAR PEAKS OF THE GRANITIC INTRUSIONS WITH THEIR FRINGING METAMORPHOSED SCHISTS AND PHYLLITES, IT WOULD APPEAR THAT A MAJOR FAULT HERETOFORE NOT POSTULATED COULD OCCUR ALONG THE STEELE CREEK VALLEY.

ALONG THE CONTACT OF THE SCHISTS, GRANITE HORNFELSIC ROCK SOMETIMES OCCURS. JOINTING IN THE GRANITE IS COMMON AT A STRIKE OF 135 DEGREES AND A VERTICAL DIP.

GLACIATION

THE STEELE GLACIER ACHIEVED WORLD-WIDE FAME IN 1966, WHEN THE RATE OF THE FLOW OF THE GLACIER PROVED TO BE MUCH GREATER THAN THE USUAL RATE OF GLACIER ADVANCES. THIS CREATED TREMENDOUS CREVASSES IN



THE GLACIER AND IT WAS DIFFICULT TO FIND THE EARLIER REPORTED COPPER AND MOLYBDENUM MINERALIZATION FOUND ON THE GLACIER.

THE GLACIAL VALLEYS OF STEELE CREEK WERE DEEPLY INCISED AT THE END OF THE ST. ELIAS GLACIATION, POSSIBLY LATE-WINSCONSIN IN AGE.

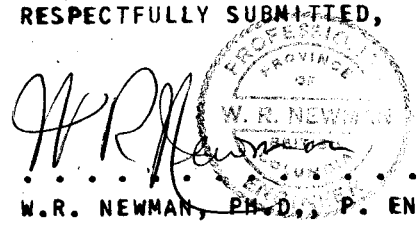
PHOTOGEOLOGY

PHOTOGEOLOGICAL STUDIES WERE USEFUL IN DETERMINING THE GEOLOGY OF THE IMMEDIATE REGION AND THE DISTRIBUTION OF THE ROCKS OUTCROP IN CLAIMS 1 TO 4. THE PHOTOGEOLOGY SHOWED THAT THE PREDOMINANT FRACTURE PATTERN IN THE GRANITE PORPHYRIES HAD A STRIKE OF APPROXIMATELY 330 DEGREES, WHILE THE SCHISTS AND PHYLLITES HAD A STRIKE OF 65 - 70 DEGREES.

CONCLUSIONS

OWING TO SNOW-COVER, FURTHER PROSPECTING WILL BE REQUIRED WHEN THE GROUND IS CLEAR OF SNOW, TO DETERMINE IF MOLYBDENUM MINERALIZATION OCCURS IN THE AREA AND IF THE SILICIFIED ROCK WITH GOLD CONTENT CAN BE TRACED TO ITS SOURCE.

RESPECTFULLY SUBMITTED,



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STEELE GLACIER

TERMINAL MORRAINE

NEWMAR EXPLORATIONS LTD.

GOAT CLAIM GROUP, STEELE CREEK AREA

WHITEHORSE M.D., YUKON

Photo - Geological Interpetation

0 500 1000

SCALE: ONE INCH to 500 FT.

LEGEND

CRETACEOUS

G Icefield Range Intrusions granodiorite granite and alaskite

Devonian Mississippian

M Greenstone phyllite quartzite

SYMBOLS

Snowfield . . . . . .

Glacier . . . . . .

Morraine . . . . . .

Pond . . . . . .

Stream . . . . . .

Outcrop area . . . . . .

Topographic linear joint/fault . .

Geological boundary . . . . . .

Gossan area . . . . . .

Ridge crest . . . . . .

Claim post . . . . . .

Claim boundary . . . . . .

Sept. 1970

PROFESSIONAL ENGINEER PROVINCE OF W. R. NEWMAN

TL-8

STEELE GLACIER

TERMINAL MORRAINE

SNOW COVERED

55° QUARTZ VEIN

NEWMAR EXPLORATIONS LTD.

GOAT CLAIM GROUP, STEELE CREEK AREA
WHITEHORSE M.D., YUKON

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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA W. R. NEWMAN

T.L.B.