Owner: I.C. STAIRS

GEOLOGICAL REPORT
VARIOUS CLAIM GROUPS
STAIRS EXPLORATION AND MINING CO. LTD.
24 MILES NORTH OF REVELSTOKE
51° 118° N.W.
MAY 15 TO SEPT. 15, 1964.

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A GEOLOGICAL REPORT ON THE

STANDARD

G

EME

RAM

KAY

MINERAL CLAIM GROUPS

PLUS THE

ABERDEEN, HARD PAN,

FREDDY JR., AND MARY JANE AND SHARON

MINERAL CLAIMS

24 MILES NORTH OF REVELSTOKE

51° 118° N.W.

FOR

STAIRS EXPLORATION AND MINING CO. LTD.

MAY 15 TO SEPT. 15, 1964

by

JOSEPH SULLIVAN P. ENG.

FEB. 12, 1965.

PART I

FOREWORD

The writer wishes to bring to the reader's attention that the geological maps Nos. 1 to 9 are Part II of this report. These maps with their legend and cross section accompany this report in a map tube marked with the same title block.

CONTENTS

ILLUSTRATIONS

INTRODUCTION:

One of the most important factors effecting the development of the Big Bend is inaccessibility, which is due to the rugged topography. Although it has been known for several years that sulphide deposits exist in the Carnes Creek area, there has been little detail recorded as to their economics. More accessible areas in the province with lower exploration costs have always had priority.

In 1963 the Stairs Exploration and Mining Co., Bathurst, N.B., recognized the mine possibilities in this area. They acquired a large group of mineral claims west of Carnes Peak. The following year they organized and financed an aggressive program of mapping, diamond drilling, and tunnelling, using a helicopter to expedite all phases of the work.

The writer was retained for the 1964 field season to supervise this exploration. The following context is a report on the mapping program for that season.

LOCATION: (Lat. 51°20', Long. 118°10')

The claims and map area lie in the Revelstoke mining division in the "Big Bend" area of the Columbia River. The central portion lies 24 miles due north of the town of Revelstoke in the Carnes Creek Basin.

PROPERTY OWNERSHIP:

The properties are divided into five groups as follows:

1) Standard Group:

Lot Nos. 7480-81-83-84-85-86-87-88-89-90 and

Lot Nos. 6944-45-46-47-48-49-51-52-53-54

Owned by G. Tomlinson, Revelstoke, B.C. and optioned to Mr. I.C. Stairs, Box 520, Bathurst, N.B.

2) Ewe Group North:

There are 96 located claims, Ewe Nos. 37 - 132, recorded in the name of Mr. I.C. Stairs.

3) "G" Group (16):

There are 16 located claims recorded in the name of Mr. I.C. Stairs.

4) Ram Group:

This group contains 58 located claims, one Crown Granted claim and one mineral Lease. There are the Ram Nos. 1-50 recorded in the name of Mr. I.C. Stairs. There are the Kay Nos. 1-6 recorded in the name of Pierre Beruschi, Revelstoke, B.C. and optioned to Mr. I.C. Stairs. The Freddy Junior and the Mary Jane and Sharon recorded by Fred Beruschi, Revelstoke, B.C. and optioned to Mr. I.C. Stairs. The Hard Pan leased from the Crown by Mr. I.C. Stairs. Finally,the Aberdeen, a Crown Grant owned by Mr. I.C. Stairs.

5) Ewe Group South:

There are 37 located claims recorded in the name of Mr. I.C. Stairs.

These five groups are shown on the Location Sketch in the back folder of this report.

MAPPING CONTROL AND PROCEDURE:

Hunting Survey Corporation (West Coast Division) prepared a set of nine topographic sheets from aerial photography. The scale was 400 feet to the inch, the contour interval was 50 feet and they covered 63 square miles through Carnes Creek Basin to Standard Peak on the north.

The geologists, using aneroids and compasses, plotted the geological data on printed copies of the tracings with respect to elevation, creeks, lakes, and ridges. This information was replotted on the topographic transparencies by tracing back from the printed sheets.

Approximately 40 square miles of the 63 on the topographic sheets were traversed by the geologists and prospectors.

GEOLOGY

1) General Statement:

The Carnes Creek area contains metamorphosed sedimentary rocks, and some volcanics, complicated by tight folding. A coarse granite porphyry stock with associated dykes and sills, intrudes these rocks in the northeastern portion of the maps. From studying the work of Dr. H.C. Gunning, G.S.C. Summary Report, 1928, the sedimentary-volcanic rocks belong to Mesozoic and Precambrian ages. The granite is Mesozoic.

The oldest formations are in the western part of the map area, and the youngest are in the east. On the basis of this distribution the

map area may be divided into the Eastern Belt and the Western Belt.

2) The Western Belt;

Only a small portion of the Western Belt was mapped. It consists of sericite schist, quartzite, and small amounts of greenstone. On the slopes east of Standard Peak several large windows of the Western Belt schists look through the Eastern Belt, so that here the concept of two distinct belts is lost.

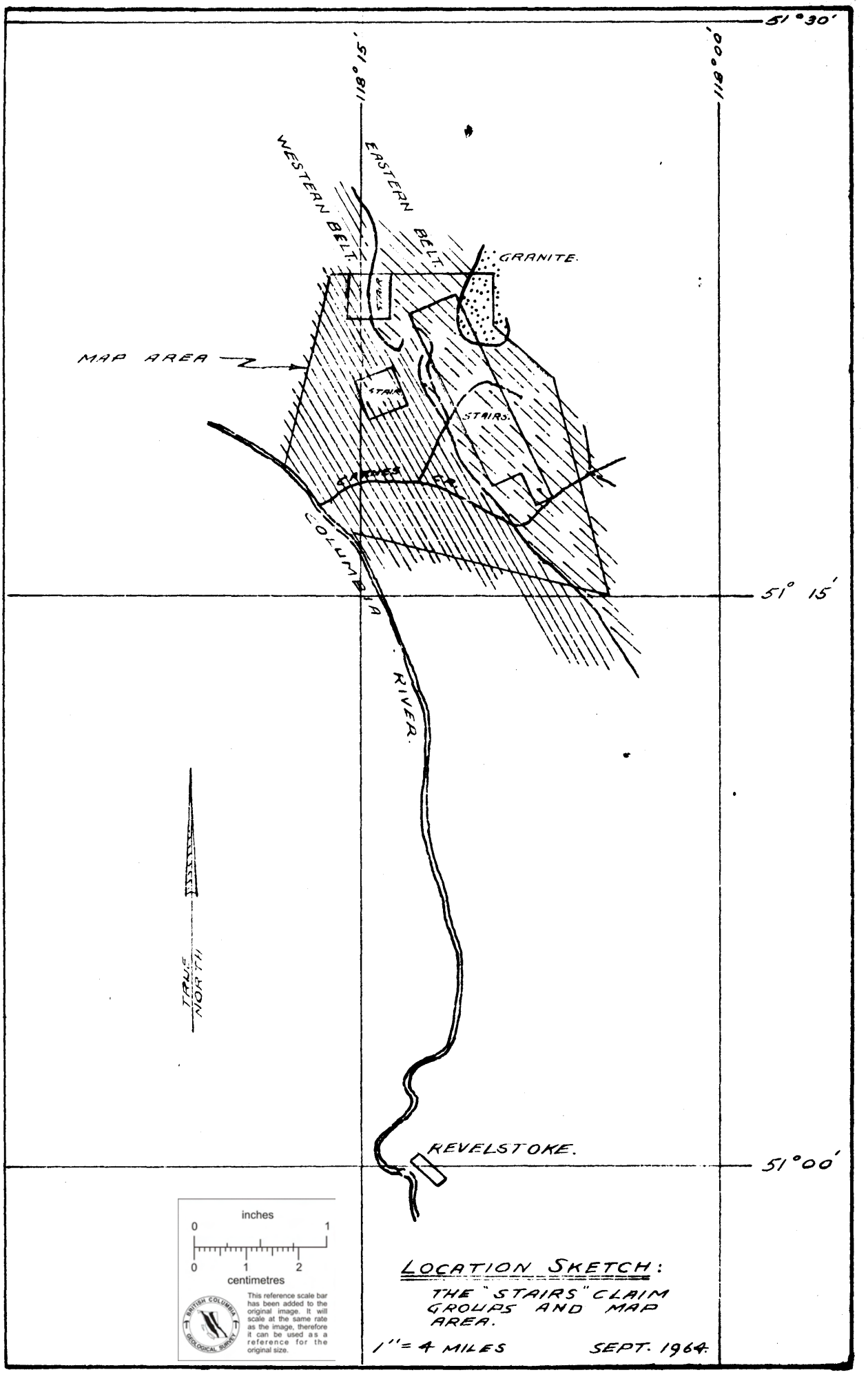
3) The Eastern Belt:

The Eastern Belt was mapped more closely, for these rocks underlie most of the claim groups. The structures involved are described separately.

The Eastern Belt is a series of medium to dark colored rocks, distinct from the Western Belt. It was mapped as six units then found to contain only four. Two units are mixtures of two or more of the other types.

The chief marker horizon is a strong banded medium grey crystalline limestone containing faint banded to massive beds of grey dolomite. Dark green chlorite schist, including serpentinized zones is the second most distinct unit. Black graphitic siliceous schist is the most widely distributed rock, but too variable in appearance to be a useful marker. To the east there is a series of quartzites and quartz sericite schists, darker than those in the Western Belt and more argdllaceous.

The two mixtures are carbonate zones. To the west and low in the belt are dark grey carbonate schists - micaceous and siliceous, minor graphite, minor carbonate schist, and some non - carbonate bands.



LOCATION SKETCH:

THE "STAIRS" CLAIM GROUPS AND MAP AREA.

1" = 4 MILES SEPT. 1964.

To the east and high in the belt are the quartzites and schists with what appears to be interbedded limestone. The lime bands are due to the up folded grey limestone that underlies the quartzites.

The legend in Part II of this report is presented in geological sequence.

4) The Granite Porphyry:

The granite stock contact was mapped but rarely did the geologists traverse the center portion. The orthoclase phenocrysts are up to 1½ inches in length. The matrix is medium to fine grained and darkened with small amounts of biotite and hornblend. On the western contact the lineation of the porphyry conforms with that of the sediments. On the southern contact there is no conformity of the lineations in adjacent units except the line of the contact itself.

In general the contact exposures of the granite are more basic and finer grained than the central exposures. Lamprophyre and pegmatite dykes can be found in the sediments close to the contact.

5) Folding:

The sedimentary rocks of Carnes Creek are tightly folded into a complex of plunging asymmetrical folds. (This is illustrated in the cross - section A/A included with the 400 scale maps.) These lie on the western limb of a large northwest trending syncline whose axis crosses Map Sheet No. 6 through the quartzite and sericite schist.

The overall plunge of this primary system is about 3,500 feet southeast in eight miles. However, this plunge is complicated by a second fold system with axis plunging steeply to the east southeast.

The axis of one of these folds passes through Roseberry Mountain with the result that the "drags" on the southern slopes plunge south and those on the northern slopes plunge north. The same type of transverse fold passes through Standard Peak causing the same changes in the fold plunges.

6) Lineation:

All the rocks of the Eastern Belt display some degree of lineation. This usually appears to be bedding planes, but the writer prefers to refer to it as banding, or simply, lineation, since it parallels the axial planes of the folds and often lies normal to the rock contacts. This structure may be bold straight lines in the lighter colored rocks, crenulations, or foliation planes in the schists. In all instances it probably represents the slippage planes due to the folding.

7) Faulting:

There are no major transverse breaks in the area mapped. The movements are strike - slip or dip - slip along the lineation. They may turn at a moderate angle into a tightly crumpled, brecciated zone, but on leaving, will turn back to the same attitude as the lineation. They can be recognized by increases in silification, irregular quartz ribbons and veining, rusty sulphides, and a marked increase in schistosity. The writer visualizes these faults as concentrations of movement during the periods of folding, with the relative movement across, say five feet of such a fault as only slightly greater than across five feet of the wall rock.

8) Mineralogy:

The predominate sulphides in the Carnes Creek area are those of silver, lead and zinc, being part of a surrounding silver - lead - zinc "province". Associated metals are gold and copper. Pyrite and arsenopyrite are widespread and usually appear intimately associated with the other sulphides. Other gangue minerals are quartz - carbonate, and the oxides of zinc, copper, and iron.

NEW MINERAL DISCOVERIES:

The location of these deposits are given as the number of the map sheet on which they occur and the claim name, or the co-ordinates.

Map Sheet No. 1

(a) Ewe Nos. 22 and 24:

Bedded quartz veins with associated tetrahedrite and oxides of iron and copper outcrop through the overburden. The specimens show some replacement of the limestone host rock.

These showings, at 6,700' A.S.L. were partly trenched to permit sampling. Poor weather interfered and snow covered the area by the time trenching was started.

The deposit lies on claims optioned to East Ventures.

Map Sheet No. 4

(a) "G" Group of Mineral Claims:

A northwest trenching float train crosses the central portion of this 16 claim group. Specimens of the float were sent to Stairs Laboratories Ltd. who identified the mineral as chrysolite, a dolomite - serpentine mixture. (Report No. 64-8-125.)

However, the most interesting mineral in the float was tiny blebs of tetrahedrite.

Most of the float occurs on claims "G" 11 and 13 but higher up the ridge is a series of rusty quartz veins in quartz serite schist that have not been explored beyond recording their presence on the maps.

Map Sheet No. 5:

(a) Ram 16 and Ewe 1:

Rusty bedded shears and quartz stockwork in limestone that are covered by these claims have not been sampled or prospected.

(b) Ram 39:

A 10 foot wide siliceous shear zone with heavy arsenopyrite and pyrite was found in the creek bed. It is exposed for approximately 15 feet lensing out to the north and disappearing under the overburden to the south.

Specimens assayed from this zone gave only trace in gold and silver.

Map Sheet No. 6:

(a) Ewe 114:

Here lies a bedded zone of quartz veining, up to 20 feet wide, in limestone. This zone has not been sampled or prospected.

(b) Ram 41:

This find was made on the valley floor of Burke Creek at 4,500' A.S.L. A bedded zone of arsenopyrite and pyrite eight feet wide lies in graphitic schist close to a contact of limestone. It has a similar attitude to that of the showings in the adit area to the south at 6,000 feet. The underlying geology is similar to the mineralized contact cut by D.D.H. A-E-I at 337.0 feet westerly

from the new Stairs Adit.

Although the assays gave only traces of gold and silver, indications are that more prospecting is needed between Burke Creek and the showings on the Freddy Junior mineral claim.

Map Sheet No. 7:

(a) 130,000 N - 81,000 E:

This is open ground, but the quartz stockwork in the area of tight dragfolds in limestone is worthy of further investigation.

Map Sheet No. 8:

(a) Ewe 110 and 112:

These rusty zones along the contacts between graphitic schist and limestone were partly covered by snow at the time the area was prospected and thus have not been fully examined.

Further, the fracturing and foliation of the granite along its southern boundary does not conform with the sediments as does the western boundary. This may have created structures that lend themselves to the localization of mineral deposits. More prospecting is recommended here.

(b) Ewe Nos. 96, 98, 127:

The rusty limestone schists that trend north from the small granite porphyry stock contain several irregular quartz veins. No fresh sulphides were found in this area and the source of the limonite is not known, but it is believed to be caused by oxidation of pyrite.

No precious metal values were discovered by assaying the oxidized material.

(c) 143,000 N - 70,500 E:

In the north fork of Pass Creek in the graphitic schists on both the south and north slopes lie several quartz veins in adjacent rusty schists. The limonite is due to oxidation of finely disseminated pyrite and pyrrhotite. No values showed in the assays taken.

Although no claim posts were found, these showings are probably those covered by the Seattle M.C.

Map Sheet No. 9:

(a) Standard Group (Standard Peak):

The old workings of the Standard Group were surveyed by compass and tape. The chalcopyrite-pyrite zone was plotted on a "20" scale plan, sampled where accessible, and the data sent to the Stairs office in Bathurst, N.B.

An interesting discovery was made at the completion of the work in the lower adit. Mr. Jack McKinney found a specimen of asbestos fiber in the dump pile. This was good chrysotile cross fiber about ¾ of an inch long, that displayed considerable strength when pulled. This discovery was not acted upon for this was another case were the early snow had already blanketed the ground.

The writer feels that the serpentinised belt from Standard Peak into Kelly Creek should be closely examined for the presence of chrysotile. This particular search could be extended to the chlorite schist in Carnes Creek in the locality of Ewe No. 35.

CONCLUSIONS:

Ore minerals are widely distributed. They localize in the shears and crumples with their long dimension following the local plunge, which frequently follows close to the present day surfaces.

Although the deposits generally strike with the general trend, northwest, they have their greatest distribution east southeast along the axis of the secondary fold system. Some replacement was noted in the deposits when the host rock was limestone, but structure tends to have the greatest localizing effect.

Mapping an area is by no means as close a coverage as prospecting. A prospector spends more time at an outcrop and in following float trains than does a mapping geologist. Thus it appears to the writer that when so many heretofore unrecorded prospects can be found in a mapping scheme, that a program with the emphasis on prospecting should follow.

The 1964 prospecting was started in July to permit the mapping scheme to advance to the point where it could be used as a control for the prospecting. The early snow put a premature end to the program so that there is much prospecting left to be done.

The mineral deposits that were discovered in 1964 have not had sufficient surface development in the way of trenching, measuring, and sampling.

Perhaps geophysics would have some value. Frequently shear zones weather more quickly than the wall rock and tend to form burden filled depressions. In such instances, if the shear is the host of the mineral deposit, geophysics would be a useful aid to a surface exploration program. Also, finding the source of the mineralized float on the "C" Group may depend on a geophysical method.

RECOMMENDATIONS :

With the knowledge gained during 1964, prospecting can be directed to the more attractive areas. For example, the areas mentioned under "New Mineral Discoveries". This would not be as costly a program as that of 1964 but more deposits would be tested. An engineer, two pairs of prospectors, and a utility man could carry out the program comfortably.

If a deposit proves sufficiently attractive to warrant diamond drilling then a separate project could be planned at that time.

The group should work each area separately. By doing this the program would economize on camp moves, and each area would be more thoroughly examined. At times trenching, sampling, mapping, and geophysics will have precedence over raw prospecting and there must be sufficient man power on hand for that type of work.

In addition, with the group working close together, the problems that may arise from accidents are minimized.

Respectfully submitted,

Jos. Sullivan, P. Eng.

VANCOUVER, B.C.
February 12, 1965.

SENECA EXPN LTD.
19 CROWN GRANTS.

TRUE NORTH.

DOWNIE CR.

SEATTLE. (C.G.)

STAIRS EXPN & MN'G. CO. LTD.
96 LOCATED CLAIMS.

I.C. STAIRS
16 LOCATED CLAIMS.

LONE LAKE.

BURKE CR.

51°20'

HOLDICH CR.

WESTAIRS MINES LTD.
58 LOCATED CLAIMS.
1 CROWN GRANT.
1 LEASE (2 YRS).

STANMACK
6 LOCATED CLAIMS.

KELLY CR.

EAST VENTURES MINES LTD.
37 LOCATED CLAIMS.

CARNES CR.

R.B. McKAY
12 LOCATED CLAIMS.

J. & L. GP.
9 CROWN GRANTS.

COLUMBIA RIVER.

118°15'

CARNES CR.

MASTODON

LEGEND

- PORPHYRITIC GR.
- LIMESTONE, ARG., Q'TZITE
- MICA SCHIST, Q'TZITE, GREENSTONE, LS.
- MAJOR CONTACT ZONES.

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

PROPERTY: RAM, EWE & "G" GROUPS.	LOCATION: REVELSTOKE, B.C.	SUBJECT: CLAIM SKETCH.
SCALE: 1" = 1 mi.	DATE: MAY 1964. SEPT. 1964.	BY: AFTER J.L. G.S.C. SUMMARY 1928