372

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

GEOLOGY

G.C. Claim Group
Buy 4-8 M.C.'s, Buy 11, 13-16 M.C.'s
Hab 47-52 M.C.'s

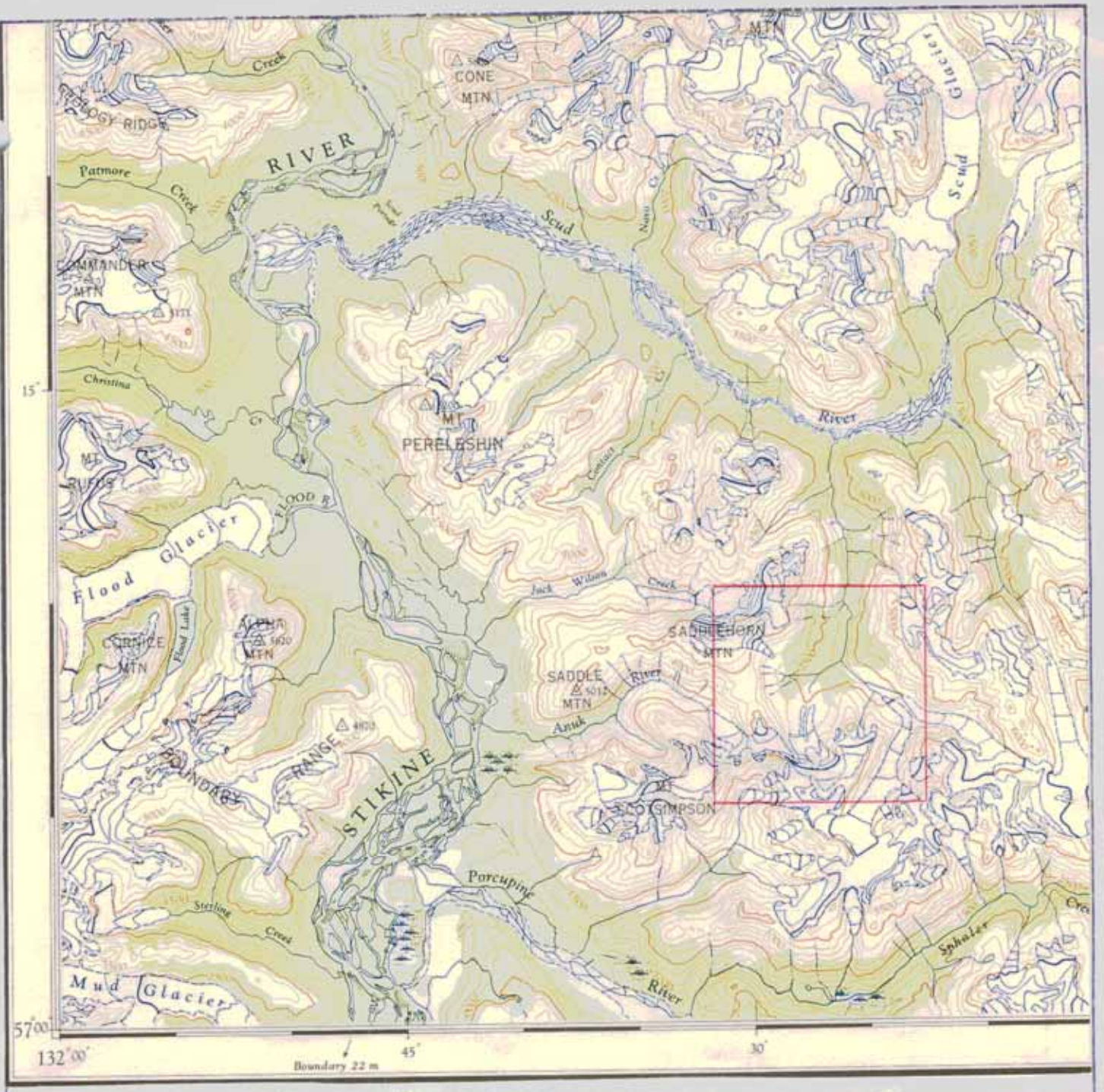
Liard M.D.
British Columbia
57° 131°SE

By: D. A. Barr

August 30, 1961

INDEX

MAPS



NORTHWESTERN EXPLORATIONS LIMITED

LOCATION MAP
GALORE CREEK AREA
BRITISH COLUMBIA

DATE: 12/12/60	DRAWN BY:	PLATE NO.: 1
REVISED BY	DATE	SCALE: 1 250,000

KENNCO EXPLORATIONS, (WESTERN) LIMITED

ASSESSMENT REPORT - GALORE CREEK

INTRODUCTION

During the 1960-61 field seasons, Kennco Explorations, (Western) Limited completed a geological mapping program within the Galore Creek area. The standard of mapping employed falls into three standards: (a) geologic mapping on air photographs of approximate scale 1" = 2700', (b) geologic mapping on a 1" = 1000' topographic map, utilizing air photos and aneroid barometers for control, and (c) plane-table mapping on a scale of 1" = 200' covering approximately 2.8 square miles.

In 1960, a topographic map of the Galore Creek area on a scale of 1" = 1000' was prepared from existing air photo coverage by Hunting Survey Corporation Limited of Vancouver. This map was of great assistance in mapping, and forms the base for the geologic map accompanying this report. In the course of ground surveys completed in 1961, control for plane-table geologic mapping was maintained by transit base-line surveys.

Personnel engaged in mapping included D.A. Barr and G.A. Rayner (geology) and R.E.G. Davis (plane-table).

A total of 52 thin sections and 6 polished sections were studied by J.R. Woodcock and G.A. Rayner from specimens collected in the area. The results of this work contributed in establishing a basis for petrologic nomenclature within the complex geologic environment existing at Galore Creek.

LOCATION AND ACCESS

The company-owned G.C. claims lie between elevations of 2000-6000 feet in the headwaters of Galore Creek, tributary to Scud River in northwestern British Columbia. (c.f. Plate No. 1) The claims are centered at latitude 57°07'30"N; longitude 131°27'W, approximately

7 miles southerly from the mouth of Galore Creek.

For many years the principal travel artery into the Stikine district has been Stikine River, which drains a large part of northern British Columbia. The river is navigable for most of the summer as far as Telegraph Creek, B.C. The season for larger boats usually commences in late April following break-up, and ends between the middle of October and some time in November.

During the summer months a weekly service has been maintained on Stikine River during recent years by Ritchie Transportation Company, operating out of Wrangell, Alaska. Supplies have been landed at various points along the river, including the mouths of Anuk River and Scud River, as far distant as Telegraph Creek. Float-equipped aircraft have also landed during the past at the mouth of Scud River.

All previous operations in the Galore Creek area have relied on helicopters to shuttle men and equipment into the headwaters of the creek from points accessible by more conventional means. During 1960-61, helicopters on contract from Okanagan Helicopters Limited of Vancouver were utilized.

PHYSIOGRAPHY AND CLIMATE

Galore Creek is a northerly flowing tributary to Scud River in the rugged Spectrum Range of the Coast Mountain physiographic division. Much of the drainage in the watershed area of 60 square miles is derived from meltwater. Discharge from the mouth of Galore Creek varies between 200,000 - 300,000 gallons per minute during the summer months.

Elevations at the head of Galore Creek vary between 2000 - 7000 feet above sea-level.

Little reliable data is available on the climate of this portion of British Columbia. During 1961 a record was maintained at the Galore Creek base-camp of maximum and minimum temperatures, rainfall and hours of sunlight. At the time of writing records are available only for June and July. These indicate a total rainfall of 2.75 inches. Lows during the period vary from 34°F to 55°F, and highs from 52°F to 80°F. According to information supplied by residents of this northern portion of British Columbia, the summer has been abnormally dry.

GEOLOGY

The Galore Creek area is underlain principally by Middle Triassic volcanic and elastic sedimentary rocks lying near the eastern flank of the Coast Intrusions. To the north and east, the watershed area is rimmed by Permian rocks consisting mainly of crystalline limestone with minor siltstone, chert and shale.

The head of the west fork of Galore Creek (West Fork) drains a large basin which is principally underlain by a complex assemblage of intrusive rocks of syenitic composition. For report purposes, this complex has been named the "Galore Creek stock". A small stock of similar composition intrudes Middle Triassic and middle Lower Triassic rocks near the head of the east fork of Galore Creek (East Fork), and is here referred to as the "Amco stock".

Much of the Galore Creek area contains good exposures of bedrock, probably as a result of high relief and recent glaciation. Talus slopes and morainal deposits obscure much of the lower sections. Within the West Fork basin, stream gullies are deeply incised into bedrock and afford excellent exposures in certain areas.

Permian Rocks

Sedimentary rocks of Permian age are well exposed to the east of the Amco stock. In this area the Permian assemblage includes white-weathering grey limestones and argillites which are contained in a recumbent fold structure overturned to the west. The Permian rocks rest unconformably on lower Triassic shales.

Lower Triassic rocks

Black, highly crumpled shales contain numerous graphitic shears and quartz interbands near the contact with the Amco stock. Numerous aplite dykes intrude the shale member at random attitudes. Most of these are narrow, but in some places near the contact they aggregate more than 10 percent by volume of the rock mass. The shales dip 60-80 degrees easterly.

Middle Triassic rocks

The oldest portion of the Middle Triassic group includes conglomerates, arkose, greywacke, tuff, phyllite, agglomerate, highly altered porphyritic flows and andesite. These rocks are well exposed on the west side of Galore Creek along the summit forming the headwall between Galore Creek and Jack Wilson Creek and Anuk River.

The rocks generally dip steeply west, although steep easterly dips occur near the contact with the Galore Creek stock.

In the main valley of Galore Creek, altered andesitic flows are intercalated with siltstones and cherts which dip southerly at 20-40 degrees.

In the northwest part of the map-area, volcanic rocks are altered to pyroxene-basalt near the northwest contact of the Galore Creek stock. The rocks contain about 30% pyroxene in 1/8" crystals which are prominent on weathered surfaces as a result of differential weathering. The groundmass is dark grey and is composed mostly of chlorite and sericite.

Near the southwest contact of the Galore Creek stock several bands of porphyritic trachyte strike northerly and are intercalated with phyllite and flow breccia. The rocks in this area dip 70-80 degrees northwest. The bands of porphyritic trachyte are more than 300 feet wide and are composed of altered pseudo-leucite crystals (?), prominently zoned, which are set in a light grey groundmass. The crystals attain diameters of 1" or more and commonly compose about 20% of the rock mass. Under thin section they appear to be composed of bands of orthoclase in a sericitic groundmass. The original composition of the crystals has not been determined.

Similar but highly altered phases have been mapped in the marginal area of the stock to the north, and a possibility exists that the bands are dykes rather than flows.

In the eastern section of the map-area the Middle Triassic rocks include a dominantly volcanic assemblage consisting mainly of agglomerate, green and purple andesites, red amygdaloidal basalts, and minor flow-breccia. These are mostly massive flows, but attitudes observed in the east-central and south-eastern portion of the map-area are fairly consistent and indicate dips of 30-70 degrees southeast.

Between West Fork Glacier and the head of South 110 Creek and embayment of volcanic rocks occurs which trends northwesterly. The assemblage is folded and sheared along northeasterly trending axes to the southeast, and dips westerly for 2000 feet toward West Fork Glacier before attitudes become indiscernible.

Highly altered phases which are chloritized and epidotized form a screen-like section along South 110 Creek and to the west. Remnants of original flow banding texture are preserved, as are inter-bands of breccia and agglomerate. The northern extension of this belt is less altered near the mouth of South 110 Creek where a well exposed section on the south side of East Fork Glacier strikes uniformly northeast and dips 50 degrees southeast.

Similar small screens have been observed in portions of the stock, but intense alteration prevents tracing of these bands with certainty for more than a few tens of feet.

On the morainal ridge about 1000 feet north of the point of emergence of West Fork from the toe of West Fork Glacier a belt of altered sedimentary rocks which strike north 30 degrees west and dip about 60 degrees to the northeast have been traced for about 500 feet. The pendant-like band includes a central zone of quartzitic arkose 90 feet wide with margins of conglomerate, each about 30 feet wide. Both walls are composed of porphyritic syenite. The extensions of the band are buried by moraine. Dark green highly chloritized lamprophyre (?) dykes, two to four feet wide strike southwesterly across the northern part of the exposure.

Syenite Complex

Included within the 'Syenite Complex' are multiple intrusions of syenitic composition which form the Galore Creek and Amco stocks.

The Galore Creek stock underlies an area of approximately nine square miles. In plan the stock is composed of a semi-elliptical section to the west of Galore Creek, with the long axis paralleling Galore Creek and reaching a length of four miles from north to south. The eastern portion of the stock has a more irregular outline.

The Amco stock, which underlies an area of less than one square mile, partly covered by East Fork Glacier, is considered to be related to the Galore Creek stock.

The following phases have been recognized in the Syenite Complex:

Dykes:
- Syenodiorite
- Basalt
- Felsite
- Banded felsite
- Fine-grained syenite
- Minette
- Chloritic lamprophyre
- Syenite porphry
- Epi syenite porphyry
- Dark syenite porphyry
- Buckshot porphyry
- Fine grained hornblende diorite

Breccias:
- Brecciated Epi porphyritic syenite
- Brecciated Dark porphyritic syenite

Intermediate syenite containing fragments of Epi porphyritic syenite and Dark porphyritic syenite.
Syenite breccia
Contact breccia
Mixed breccia

Younger syenite

Buckshot porphyry

Lavender porphyry

Intermediate porphyritic syenite

Syenite, epidotized syenite

Dark porphyritic syenite

Epidotized porphyritic syenite

Epi porphyritic syenite, syenite, epidotized syenite.

The most common phase encountered in the Complex is light grey, fine to medium grained syenite, which is generally porphyritic. In certain areas phenocrysts of orthoclase are so crowded as to aggregate about 50 percent of the rock, and the name 'porphyry' would be more descriptive. The latter term has in general been reserved however, to denote dykes of similar composition.

The largest phenocrysts noted reach lengths of 4 inches and cross-sectional dimensions of one inch or more. Phenocrysts are frequently oriented in parallel planes, particularly in smaller bodies, or near contacts, and the attitudes are mappable. As a rule steep dips are noted, and there is a strong indication that the phenocrysts near the contact of the stock reflect the attitude of the contact.

In the northeast part of the map-area, i.e. North 110 Creek, a gradual increase in size and packing of feldspar phenocrysts occurs with distance from the contact of a tongue-like portion of the stock.

The linear parallelism or foliation is not restricted to large crystals, this feature being shared in certain well developed areas by smaller laths of orthoclase in the groundmass.

The average composition of this phase of the Complex is about 70% orthoclase, of which 25% is in phenocrysts and 75% in

matrix. Much of the orthoclase is altered to sericite, and the orthoclase in the matrix is commonly somewhat more sericitized than the phenocrysts.

Secondary orthoclase is rare, but has been noted in thin sections.

Epidote is so commonly associated with this phase, that it can be incorporated into a field name, at least tentatively. It occurs throughout the matrix in granular and segregated form as an alteration of pyroxene.

The average rock contains 15-20% mafic minerals which are generally altered to chlorite and epidote. Pyroxene, amphibole and biotite occur in variable amounts.

Plagioclase is rare. It occurs on fractures and open spaces in porphyritic syenite on the west rim of the stock.

Quartz occurs in minor amounts, and composes up to 3% of the rock, generally as fracture filling.

Bodies of similar composition but lacking porphyritic texture occur in various portions of the stock. These have been mapped as 'syenite' or 'epidotized syenite' in order to emphasize the different textural appearance. Some evidence has been observed of alteration of the large feldspar phenocrysts to epidote, and this condition carried to completion could destroy the original porphyritic texture.

Epi porphyritic syenite occurs over a considerable time range as evidenced by field relationships. Dykes of epidotized syenite porphyry intrude Epi porphyritic syenite. Large masses of Epi porphyritic syenite intrude granitized volcanics west of South 110 Creek. Bodies also intrude Dark syenite near the toe of West Fork Glacier, syenitic breccia on Dendritic Creek, brecciated Epi syenite, also on Dendritic Creek.

Dark porphyritic syenite

The earliest phase of the Complex noted in mapping has a type occurrence around the toe of West Fork Glacier. The average specimen contains about 20% orthoclase in euhedral phenocrysts, which are generally stubbier than those in Epi porphyritic syenite. These are set in a dark to medium grey colored, fine-grained groundmass. Considerable variation in size of orthoclase phenocrysts occurs, but these are commonly 1 cm. by 2 cm. in size. Parallel orientation of the larger phenocrysts is commonly observed.

Thin section studies by G.A. Rayner indicate that the groundmass is composed of 50% orthoclase, 15% biotite which is fine-grained, with crystals averaging 0.03 mm. in cross-section. It is the presence of the latter mineral which imparts a dark color to the matrix and which feature is used as one of the criteria for distinguishing it from Epi porphyritic syenite. Sericite, amounting to 2% occurs as an alteration product in orthoclase. Approximately 2% magnetite was observed in a type specimen, occurring along fractures, and minor chalcopyrite is associated with about 1% euhedral pyrite.

A thin section study of a similar phase was made by J.R. Woodcock. The rock contains about 35% orthoclase as phenocrysts which have albite replacement and are altered along cracks and cleavages to biotite flakes. Carbonate alteration occurs throughout crystals, and alteration is most intense in central parts of crystals.

The groundmass of the latter section is a mat of orthoclase laths which have clay alteration. Small biotite flakes and minor hematite occur throughout the groundmass. Biotite crystals up to 2 mm. long are also slightly altered in places to iron oxide and sericite.

The most abundant exposures of the unit occur in the area lying near the toe of the West Fork Glacier, northerly for about 2500 feet. The unit has not been recognized around the marginal areas of the Complex.

Intermediate porphyritic syenite

Intermediate porphyritic syenite is normally a medium grey rock with a medium to fine-grained matrix. It is characterized by euhedral mafic crystals 1 cm. or less in size occurring with feldspar phenocrysts about 2 cm. in size. Biotite flakes about 1 to 3 mm. in size occur in the matrix with orthoclase.

This phase lacks the development of second generation phenocrysts which is so common a characteristic of both Dark and Epi porphyritic syenite.

Near the toe of West Fork Glacier breccia occurs which includes fragments of both Dark and Epi porphyritic syenite in Intermediate porphyritic syenite.

The typical unit has not been noted extensively, being restricted in occurrence to the lower Dendritic Creek area.

Lavender porphyry, Buckshot porphyry

Both Lavender porphyry and Buckshot porphyry are similar in appearance and although mapped as separate units, the two intrusives are probably related in origin.

As the name implies, Lavender porphyry is a lavender colored rock composed of a mesh of intergrown feldspar phenocrysts which constitute about 80% of the average specimen. The feldspar phenocrysts are euhedral, both lavender colored and white feldspars occurring with green mafics. The lavender colored phenocrysts average about 5 mm. in length, whereas the white feldspars are shorter and stubbier.

Lavender porphyry occurs in the northwest part of the Complex, where it outcrops for about 1500 feet on a north tributary to Dendritic Creek. It is intruded by dykes of basalt and syenite. Although contacts with nearby Epi porphyrytic syenite are poorly exposed, it appears to be later than this unit.

Buckshot porphyry is characterized by euhedral white feldspar phenocrysts which impart a spotted appearance to the rock. It occurs over an area of about 2000 by 3000 feet across the head of South 110 Creek. In this area it shows intrusive relationships with Middle Triassic volcanic rocks and their granitized equivalents. It contacts Younger syenite along sheared and brecciated contacts, but its age relationship to this unit has not been determined.

Younger syenite

A large mass of fine to medium grained massive syenite occurs on the ridge lying between the east and west forks of Galore Creek. This mass has been named 'Younger syenite'. The typical rock is non-porphyritic, consisting of approximately 85% orthoclase and 15% mafic minerals.

A belt of granitized Middle Triassic volcanic rocks which included flow breccia equivalents strikes southwesterly across the ridge, across a width of 800-1000 feet. Margins are gradational, and the least granitized portions appear to lie near the centre of the belt. Original flow-banding is considerably distorted with the consequent development of intricate swirl patterns which resemble migmatization effects.

Less granitized equivalents, largely composed of feldspar and epidote occur in the glacial basin west of the head of South 110 Creek, and along South 110 Creek itself. The belt can be traced to relatively unaltered Middle Triassic outcrops lying in an old glacial channel on the south side of East Fork Glacier.

The age relationships between Younger syenite and other major units of the Complex are largely obscured by alteration, pyritization and shearing in the vicinity of contacts.

Breccias

Breccias in the Complex and on its margins are divisible into three broad classifications as follows:

(a) Fault or contact breccias.
(b) Incipiently brecciated areas in which little rotation of fragments occurs.
(c) Intrusion breccias.

On the contact between Younger syenite and Buckshot porphyry to the west of the head of South 100 Creek, several areas of breccia occur in which fragments of both intrusives are cemented largely by magnetite, chalcopyrite, garnetite and epidote. Where contacts are exposed a gradual decrease in amounts of magnetite and skarn minerals occurs, to recognizable Younger syenite or Buckshot porphyry within a few tens of feet. Much of the area is covered by talus, and rubble derived by frost-heave action.

Along the northern margin of the stock a large area is underlain by breccia composed of fragments of fine to medium grained syenite in a dark grey-green matrix of chlorite and pyroxene. The fragments are subangular and attain cross-sectional dimensions of 4 inches. The groundmass is similar to that of the altered pyroxene-basalt to the west.

Magnetite forms a matrix for a small body of breccia in which angular fragments of Epi syenite, Intermediate porphyry and indeterminate bleached phases are cemented by massive magnetite. Individual fragments reach cross-section dimensions of one foot, although most average 2 to 3 inches. The occurrence lies about 1000 feet northwest of the toe of West Fork Glacier, and it has been traced northerly for about 300 feet in length and across a maximum width of about 30 feet. A centrally located section is estimated to contain up to 50% magnetite. Laterally the magnetite fills fractures in incipiently brecciated rock, Epi syenite lying to the west and Intermediate porphyry to the east.

A fragment of magnetite submitted to Coast Testing Laboratories Limited of Vancouver for semi-quantitative spectrographic analysis produced the following results. The fragment contained 89% magnetite.

	%		%
Fe	64.0	Ni	0.0025
Ca	2.5	Pb	0.001
Al	2.0	Ag	0.0002
Si	2.0	Cr	Trace
Mg	1.0	As	Not detected
Ti	0.5	Bi	" "
V	0.2	Cd	" "
Zn	0.1	Nb	" "
Ba	0.02	Au	" "
Cu	0.005	Sb	" "
Co	0.004	W	" "
Sn	0.004	Ta	" "
Mo	0.004		

Several areas near the toe of West Fork Glacier contain incipiently brecciated rock in which fractures are filled with magnetite. Within these areas small kernels of magnetite breccia exist, which are similar to the above reference. These breccias probably originated from stress adjustment rather than from explosion. This appears to be the most tenable hypothesis when considering the progressive decrease in brecciation from centers, and the lack of well defined walls. The amount of magnetite introduced indicates a hydrothermal origin, under passive conditions in view of the lack of replacement of boundaries of fragments.

Approximately 7000 feet northwest of the junction of Dendritic Creek with West Fork, syenite breccia is exposed at the east end of an outcrop 150 feet long by 20 feet wide. Fragments of fine-grained leucocratic syenite occur in a highly biotitized syenite matrix. A thin section study of a specimen containing a fragment of leucocratic syenite about 4 cm. in diameter indicates that the matrix is more highly altered than the fragment. Chalcopyrite occurs in disseminated form in the fragment and near its margin in the matrix.

Gradations between intrusion breccias and incipiently brecciated areas commonly occur. Mixed breccias in which included fragments are of varied composition occasionally form the core of incipiently brecciated masses. The possibility exists that some of the Mixed breccias have an explosive origin, but no positive evidence has been observed.

Along Dendritic Creek large areas of incipiently brecciated Epi syenite occur together with similar zones of incipiently brecciated Intermediate porphyritic syenite. Several large dyke-like bodies of Epi porphyritic syenite intrude these areas, and good intrusive relations occur on the northwest trending dyke about 1500 feet west of the mouth of Dendritic Creek.

Intrusive breccia is observed in several outcrops on north tributaries to Dendritic Creek. These are characterized by a diversity of fragmental types, many of which have not been recognized in nearby outcrops. In this area also occur breccias which closely resemble some of the Middle Triassic breccias observed southeasterly from the head of South 110 Creek. Contact relationships are so obscured by alteration that it is difficult to reach positive conclusions on the probable origins of these breccias.

Dykes

A great variety of dykes occur within the map-area. Age relationships have not been established for all dykes but the following are listed in order from youngest to oldest: syenodiorite, basalt, felsite, minette, syenite porphyry group.

Several of the more basic varieties are less than one foot in width, while many of the dykes commonly attain widths varying from 10 to 20 feet. Dyke-like bodies of Epi porphyritic syenite attain widths of 200 feet. Several dykes have been traced for 1500 feet in length, and it is probable that most of the larger dykes continue for thousands of feet.

Composite dykes are common in the basin of West Fork, particularly near the toe of West Fork Glacier.

Dykes occasionally occupy faults. In reality the condition may be more common than is indicated, as a result of the difficulty of determining displacements owing to the complex nature of the geology.

The greatest concentration of dykes observed occurs in portions of the Galore Creek Complex. In northern tributaries to Dendritic Creek, numerous persistent dykes, with dominant easterly trends and moderate to steep dips both northerly and southerly cut through the area.

There is some evidence of the occurrence of a peripheral set of dykes around the margin of the Complex. On the west side, the majority of the dykes strike northerly with steep dips easterly and westerly. Both northerly and easterly trending dykes are common in the north part of the Complex. Several dykes parallel the contact of a tongue-like mass of the Complex on North 110 Creek.

Several copper-bearing and pyritic dykes occur. The former are all related to the syenite porphyry group, while the latter include both syenites, felsites and chloritic lamprophyres.

STRUCTURE

The regional trend shared by major intrusions, folded rocks, embayments and pendants of older rocks in the Scud River area is northerly. The northerly elongation of both the Galore Creek and Amco stocks reflects this trend.

In the Galore Creek area several strong northerly trending structures occur. Included are fracture cleavage trends in the west half of the Galore Creek stock, schistosity developed in volcanics and sediments on the west and east sides of the stock and northerly parallelism of foliation planes at the south end of the stock.

Within the Galore Creek stock major faulting has not been recognized, although minor shears and faults are common. It is possible that early fault patterns have guided subsequent intrusions in the Syenite Complex with the resultant masking of the faults.

A distinct closely spaced system of fractures resembling sheeting, and defined for report purposes as fracture cleavage, is well developed over large portions the Galore Creek stock. By definition the term fracture cleavage has been restricted to the occurrence of greater than 20 cleavages per foot. Where most intensely developed, over 100 parallel to sub-parallel cleavages occur.

In detail the individual fractures cut across phenocrysts, matrix and alteration products alike, and are later than the rock alteration. There is no evidence of recrystallization or formation of platy minerals parallel to the fractures.

The dominant trend of cleavages conforms to the shape of the basin of the West Fork. Near the west margin of the stock the predominant joint direction is westerly, with true fracture cleavage occurring immediately to the east accompanied by easterly dips. For several thousand feet easterly dips varying from 25-50 degrees east occur. In the floor of West Fork basin flat fracture cleavage is common, although great diversity of attitudes occur in detail. Near the toe of the West Fork Glacier the prevailing attitude of fracture cleavage is easterly with shallow northerly dips. On the east side of the basin west dips are common. On South 110 Creek the prevailing attitude is reversed, with northwest strikes and northeast dips to fracture cleavages.

ALTERATION

The rocks over large sections of the Complex are so altered and sheared that identification of original rock-forming constituents is frequently not possible.

All the major units of the Complex are propylitized to varying degrees. The most common form is the development of epidote, chlorite and sericite principally by alteration of the mafic minerals and orthoclase. Carbonates are commonly developed but quartz occurs only rarely.

Biotite frequently replaces mafic minerals and occurs as fracture filling. Coarse veinlets of biotite are frequently observed. Of ten sections studied from mineralized areas, five contained greater than 10% biotite.

In the more intensely altered areas, feldspars alter to sericite rather than to clays. The only argillic alteration noted occurs in a float fragment of porphyritic syenite containing 68% clay development.

Pyrite and specular hematite commonly occur on joint planes, in disseminated grains, and as stringers up to 2 cm. wide. Hematite and pyrite probably stain much of the contact phase of the Complex.

Bleaching is common in the area around the toe of West Fork Glacier and northerly.

FINANCIAL STATEMENT

Wages & Salaries	Period	Amount	Man Days	Total
D.A. Barr	July-Aug-Sept/60 June-July-Aug/61	$2,555.00	73	$ 2,555.00
G.A. Rayner	"	2,400.00	80	2,400.00
R.E.G. Davis	"	2,000.00	80	2,000.00
Base map preparation				1,350.00
Costs directly applicable				7,758.00
				$16,063.00

Galore Creek, B. C.

August 25, 1961

D. A. Barr

GEOLOGY

LIST OF CLAIMS AND WORK DISTRIBUTION

Group No.	Claim No.	Record No.	Tag No.	Total Spent	Total Claimed	Years Applied
1	Buy 4	4489	226104			
	5	4490	226105	953.55	100	1
	6	4491	226106	652.00	100	1
	7	4492	226107	40.75	100	1
	8	4493	226108			
	11	4504	226111	81.50	100	1
	13	4506	226113	244.50	100	1
	14	4507	226114	40.75	100	1
	15	4508	226115	16.30	100	1
	16	4509	226116	40.75	100	1
	Hab 47	3792	B76390	40.75	100	1
	48	3793	B76388	489.00	100	1
	49	3794	B76393	285.25	100	1
	50	3795	B76394	489.00	100	1
	51	3796	B76379	244.50	100	1
	52	3797	B76380	8.15	100	1
	G.C. 79	8786	228779			
	123	9620	405723			
	124	9621	405724			
	125	9622	405725			
				3626.75		
2	G.C. 2	8644	390722	203.75	100	1
	4	8646	390724	81.50	100	1
	5	8647	390725	366.75	100	1
	6	8648	390726	81.50	100	1
	7	8649	390727	163.00	100	1
	8	8650	390728	806.85	100	1
	9	8651	390729	489.00	100	1
	10	8652	390730	244.50	100	1
	11	8653	390731	244.50	100	1
	18	8660	390738	8.15	100	1
	19	8661	390739	40.75	100	1
	21	8663	390741	40.75	100	1
	23	8665	390743	122.25	100	1
	34	8676	390754	81.50	100	1
	35	8677	390755			
	36	8678	390756	81.50	100	1
	37	8679	390757			
	46	8688	228746	40.75	100	1
	121	9618	405721	40.75	100	1
	122	9619	405722	40.75	100	1
				2974.80		

Group No.	Claim No.	Record No.	Tag No.	Total Spent	Total Claimed	Years Applied
3	G.C. 1	8643	390721	203.75	100	1
	80	8806	405780	40.75		
	81	8807	405781	40.75		
	88	8814	228788	81.50		
	89	8815	228789	81.50	100	1
	90	8816	228790			
	91	8817	228791			
	118	9615	405718			
	119	9616	405719		100	1
	120	9617	405720	40.75	100	1
	126	9623	405726	40.75	100	1
	127	9624	405727	40.75	100	1
	128	9625	405728	40.75		
	129	9626	405729	40.75		
	136	9633	405736	40.75		
	137	9634	405737	40.75	100	1
				733.50		
4	G.C. 13	8655	390733	709.20	100	1
	14	8656	390734	244.50	100	1
	15	8657	390735	81.50	100	1
	16	8658	390736	244.50	100	1
	17	8659	390737	81.50	100	1
	47	8689	228747	40.75	100	1
	48	8690	228748	81.50	100	1
	49	8691	228749	163.00	100	1
	50	8692	228750			
	51	8693	228751			
	52	8694	228752	8.15	100	1
	53	8695	228753		100	1
	60	8702	228760	16.30	100	1
	61	8703	228761	8.15	100	1
	62	8704	228762			
	63	8705	228763	8.15	100	1
	64	8706	228764			
	68	8710	228768	8.15	100	1
	69	8711	228769	8.15	100	1
				1711.50		

Group No.	Claim No.	Record No.	Tag No.	Total Spent	Total Claimed	Years Applied
5	G.C. 24	8666	390744	8.15	100	1
	54	8696	228754	40.75		
	55	8697	228755			
	56	8698	228756	81.50		
	57	8699	228757	154.85	100	1
	65	8707	228765		100	1
	66	8708	228766	81.50		
	67	8709	228767	81.50	100	1
	70	8712	228770	81.50	100	1
	71	8713	228771	8.15	100	1
	72	8714	228772	81.50	100	1
	73	8715	228773	81.50	100	1
	74	8716	228774	8.15		
	75	8717	228775	8.15		
	130	9627	405730			
	131	9628	405731	40.75		
	132	9629	405732	40.75		
	133	9630	405733	40.75		
	134	9631	405734	8.15		
	135	9632	405735	8.15		
				855.75		
6	G.C. 1 Fr.	8642	390766	847.60	100	1
	2 Fr.	9606	390792	81.50	100	1
	3	8645	390723	40.75	100	1
	12	8654	390732	489.00	100	1
	26	8668	390746		100	1
	27	8669	390747	8.15	100	1
	28	8670	390748			
	29	8671	390749	8.15	100	1
	30	8672	390950	8.15	100	1
	31	8673	390751	8.15	100	1
	32	8674	390752	16.30	100	1
	33	8675	390753			
	98	8824	228798			
	99	8825	228799			
	100	8826	228740			
	101	8827	228741			
	110	9607	405710	733.50	100	1
	115	9612	405715			
	116	9613	405716			
	117	9614	405717			
				2239.75		

Group No.	Claim No.	Record No.	Tag No.	Total Spent	Total Claimed	Years Applied
7	G.C. 25	8667	390745	16.30	100	1
	38	8680	390758	374.65	100	1
	40	8682	390760	326.00	100	1
	42	8684	390762	81.50	100	1
	44	8686	390764	81.50	100	1
	58	8700	228758	163.00	100	1
	59	8701	228759	81.50	100	1
	102	8828	405702	8.15	100	1
	103	8829	405703	81.50	100	1
	104	8830	405704			
	105	8831	405705			
	111	9608	405711	40.75	100	1
	113	9610	405713	8.15	100	1
	148	9645	405748	81.50	100	1
				1344.50		
8	G.C. 39	8681	390759	204.00	100	1
	41	8683	390761	163.00	100	1
	43	8685	390763	163.00	100	1
	45	8687	390765	244.50	100	1
	106	8832	405706			
	107	8833	405707			
	108	8834	405708			
	109	8835	405709			
	112	9609	405712		100	1
	114	9611	405714			
	144	9641	405744	163.00	100	1
	145	9642	405745	244.50	100	1
	146	9643	405746	122.25	100	1
	147	9644	405747	40.75	100	1
	149	9646	405749	244.50	100	1
				1589.50		
9	G.C. 82	8808	405782			
	83	8809	405783	40.75	100	1
	84	8810	405784	40.75	100	1
	85	8811	405785	40.75	100	1
	86	8812	405786	40.75		
	87	8813	405787	40.75		
	92	8818	228792	81.50	100	1
	93	8819	228793		100	1
	94	8820	228794	81.50	100	1
	95	8821	228795			
	96	8822	228796			
	97	8823	228797			
	138	9635	405738	81.50	100	1
	139	9636	405739	81.50		
	140	9637	405740	40.75	100	1
	141	9638	405741	122.25	100	1
	142	9639	405742	81.50		
	143	9640	405743	163.00		
				937.25		


LEGEND
QUATERNARY
Recent
Unconsolidated sand, silt, gravel ; moraine
MIDDLE TRIASSIC
Mainly andesitic and basaltic volcanic rocks, amygdaloidal flows, agglomerate, flow breccia, porphyritic trachyte, phyllite, siltstone, tuff, greywacke
23
INTRUSIVE ROCKS
Dykes
Basalt 22
Syenodiorite 21
Fine-grained hornblende syenodiorite 20
Felsite, banded felsite 19
Fine-grained syenite 18
Minette, chloritic lamprophyre 17
Buckshot porphyry 16
Syenite porphyry 15
Dark syenite pophyry 14
Quartz vein 13
Breccias
Contact or fault breccia
Intermediate syenite breccia 12
Syenite breccia 11
Brecciated Dark porphyritic syenite 10
Brecciated Epi porphyritic syenite 9
Mixed breccia
Granitized equivalent of Middle Triassic 8
Younger syenite 7
Buckshot porphyry 6
Intermediate syenite 5
Syenite 4
Dark porphyritic syenite 3
Lavender porphyry 2
Epi porphyritic syenite 1
Leuco - phases prominent
Potash metasomatism prominent
Magnetite prominent
Pyritization intense
Gypsum
Bedding or flow attitude
Dyke attitude
Joint attitude
Fracture cleavage (> 20 cleavages / foot)
Fault attitude
Schistosity
Foliation of feldspar phenocrysts
Outcrop boundary
Mapping limit
Geologic contact, defined, approximate
Contour interval 200 feet
Creek
Jack Wilson Creek Glacier
GALORE CREEK
WEST FORK
EAST FORK
North Fork Creek
South Fork Creek
East Fork Glacier
West Fork Glacier
Anuk River Glacier
Glacier
Névé
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KENNCO EXPLORATIONS (WESTERN) LIMITED
GEOLOGIC MAP
GALORE CREEK PROPERTY
(GC CLAIMS)
Galore Creek, Liard M.D.
British Columbia
DATE: 29/8/61
DRAWN BY:
PLATE NO.
REVISED BY
DATE
SCALE:
1" = 1000'
31x40
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