679

A Geological and Physical Assessment Report of the Joan, Bea and part of the Web groups of Mineral Claims Situated on Mt. Copeland North-West of Revelstoke B.C.

51° N, 118° W, S.E.

By
George A. Wilson, P.Eng.
on behalf of

King Resources, Ltd.

July 17 to August 31, 1965

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INTRODUCTION

In August 1964, Messrs. Ewer and Derickson located 12 mineral claims known as the Joan Group, and 11 mineral claims known as the Bea Group, on the north side of Mt. Copeland 15 miles north-west of Revelstoke, B.C. It was known that molybdenite occurred on the north slope of the mountain at an elevation of 7300', and it was thought that more could be found in the area. In addition to the molybdenite showings, there were fragments of syenite in talus near the top of the mountain with bornite mineralization and extensive malachite and azurite stain. An additional 84 mineral claims were located north, east and south of the original groups of claims in the spring of 1965.

In order to determine the need for, and extent of additional work it was decided to collect assay samples from strata thought to contain molybdenite and to conduct concurrently a geological mapping program of adjacent outcrops.. To these ends, a four man crew consisting of a geologist two prospector-samplers and a prospector-cook were moved to a camp at 7350' on mineral claim Joan 7 early on July 19, 1965. On July 27, the camp was moved down to a bench on Joan 9 at an elevation of 6400'. On July 31, the crew with the exception of the geologist and a helper was moved out. The geologist was moved to Revelstoke late on August 1. All moves were made by helicopter.

For the remainder of August the geologist managed operations from Revelstoke,, while making excursions to the field according to the availability of helicopters.

On August 21 and 22 a diamond drill was moved by helicopter to a location on Joan 7, where it commenced a drilling program.

Assistance from Dr. J.T. Fyles in the form of useful discussions and advice, and loaned air photographs and base maps is gratefully acknowledged.

LOCATION

The Joan, Bea, and Web groups of mineral claims are situated astride the summit of Mt. Copeland near its west end. Mt. Copeland part of the Gold Range of the Monashee Mountains is a ridge with a nearly east-west trend and summit elevations ranging from 7800' to 8400'. It lies between Copeland Creek to the north and Hiren Creek to the south. Both creeks flow east into the Jordan River which flows south-east to the Columbia River which it joins at Revelstoke.

TOPOGRAPHY

Mountain slopes, particularly those facing north, are steep and in places can be climbed only with considerable difficulty. Glaciers occupy most depressions on the north slopes. Snow covers much of the mineralized area on the Joan Group until late July. Late August is probably the best time to examine outcrops on ths north slopes. Copeland Creek is at an elevation of 5000' in the vicinity of the claims. In six miles it descends to slightly lesss than 2200'. Hiren Creek to the South of Copeland Mountain has a similar grade.

The lower slopes of the valleys have a dense growth of trees and shrubs. Below 5500', outcrops are rare. Trees of fair size extend to 6500', but above that elevation they are stunted. Tree line is near 7300'

Many of the south slopes are meadows and it is on these slopes that foot traversing is most feasible.

ACCESS

A logging road extends up the Jordan River to a point not far above the mouth of Hiren Creek. From there a trail is said to lead up Copeland Creek. Freight can be moved 7 or 8 miles up the Jordan River by road, and from there to the property by helicopter. A road could be built up either Copeland Creek to the north side of the property or up Hiren Creek and one of its tributaries to the south side of the property.

METHOD OF WORK

Geological mapping and channel sampling of mineralized zones were done concurrently during the last two weeks of July. Extensive weathering accompanied by deposition of iron oxides on the rocks obscured mineral content in many places. It was possible that surface alteration and leaching might affect the quality of samples collected.. Therefore, the crew was equipped with a portable gas drill. The samplers on the crew drilled and blasted cuts across selected zones where alteration was extensive, to permit sampling of fresh rock. Samples 40 to 60 pounds in weight were collected at several places. The assay results are listed in the appendix.

After the departure of thepprospector-samplers, the time was spent in processing data, drawing base maps, making foot traverses over specific areas, and in attempting to secure a diamond drill.

Late on August 23 a diamond drill commenced drilling. Results from this part of the program are not available at the time this report is being written.

GEOLOGY

Stratigraphy

All names applied to rock units in this report are based on field examination with a 10x hand lens and may be regarded with some skepticism. This is particularly true of names such as sillimanite gneiss, and nepheline syenite. The term sillimanite is used for a porphyroblastic grey to colourless silicate common in some brown weathering gneisses and which may be sillimanite. Nepheline syenite is applied to a grey syenite with a mineral resembling nepheline. Wheeler (1) applied the term to a crystalline rock in an area which may coincide with that to which the term is applied in this report.

With the exception of some late dark green basic dykes, all of the rocks in this area are part of the Shuswap metamorphic complex. All, except some quartzites are foliated to some degree and many are quite schistose. In the area of the Joan, Bea, and Web groups, schistosity is parallel with the original stratigraphic units where such units are recognisable.

Tops, and therefore order of superposition could not be established on any of the units examined on the Joan, Bea, and Web groups. Relative positions of the units are shown on the map and stratigraphic sections which accompany this report. Stratigraphic positions of control stations are shown on the stratigraphic sections but the lines of the sections were ommitted from the map in order to avoid cluttering it.

Descriptions of the rock units are furnished on the sections mentioned above, and will not be repeated here, although some general remarks are in order.

The quartzite which occurs on both sides of the axis of a fold below control station GW-37 on the north slope of Mt. Copeland is different from the interbedded quartzite and carbonate which occurs above station GW-37. The proportion of carbonate in the interbedded quartzite and carbonate varies from place to place, partly due to original deposition and partly due to

(1) Wheeler, J.O., 1965: Big Bend map-area, British Columbia; <u>Geol. Surv. Can.</u>, Paper 64-32.

squeezing out of carbonate during folding.

The proportion of dolomite to limestone varies from place to place. This variation is due to a combination of original deposition and to metamorphic history. The relative importance of the two agencies is difficult to asses at this stage of the investigation.

Another variation in depositional character is apparent. From station GW-43 at least as far west as GW-21, the carbonate and lime silicate band which is the locus of mineralization is separated from the biotite-amphibole schist by a succession of quartzose clastic beds as much as 100' thick. These siliceous clastic rocks are quartzite in places and hard sandstone in others. These sandstones and quartzites include numerous thin lenticular beds of carbonate. Almost everywhere the siliceous clastic rocks are mineralized with pyrite and pyrhotite and in places with magnetite. On fresh surfaces they are grey to yellowish grey. Weathered surfaces are almost universally yellowish brown to a dark red-brown. The unit clearly tapers east to station GW-8 where it is only a few feet thick. East of there it is absent between the biotite-amphibole schist and the carbonate but similar rocks occur on the opposite side of the carbonate unit.

Changes in texture attributable to original deposition occur within the carbonate succession. One such change occurs at GW-20. There, a wedge of finely crystalline dolomite thickens in a westerly direction from 0' to nearly 10' in approximately 50'. It occupies the position of mineralized beds to the East but is only sparsely mineralized, the molybdenite occurring above and below it. This could not be fully investigated due to the steepness of the face on which it occurs.

Adjacent to the carbonate beds and on either side of them, are what probably were quartzose limestones or quartzose dolomitic limestones, now converted to a lime-silicate skarn with coarse to very coarse diopside, fine brown garnet, and coarse brown mica with patches of coarse calcite and dolomite. These are the beds of greatest economic interest. Carbonate beds are thin to absent in association with the lime-silicate skarn west of the steeply sloping gully between GW-24 and GW-43. West of the gully,nepheline syenite is in contact with the skarn.

Advanced metamorphism has produced numerous masses of crystalline rock, the composition of which is a function of the composition of the beds from which they were derived. These masses of crystalline rock trend parallel with recognizable stratigraphic units and grade into them along strike. This is particularly noticeable in the biotite-amphibole schist. At GW-5 on the south side of the syncline-like fold, there is a one foot interval of grey banded syenite. Eastward this unit expands so that in the vicinity of GW-10 it occupies some 50' of the section. A similar wedge of a different syenite occurs south of the carbonate in the biotite-amphibole schist. Its width increases from 6",30' east of GW-5 to 10' some 45' west of GW-5. The south margin of the wedge of syenite conforms fairly well to bedding and schistosity but the south margin crosses both at a small angle. Foliation within the syenite matches foliation in the biotite-amphibole schist.

Mineralization

Pyrite, pyrrhotite, and magnetite occur to some degree in all of the strata adjacent to the carbonate beds or the lime-silicate skarn. Their presence has already been mentioned with respect to the sandstones and quartzites north of the lime-silicate beds..Magnetite is a common constituent of the medium to coarse grained pegmatite stringers and lenticles in the various gneisses.. Near the summit of Mt. Copeland at GW-25, magnetite occurs as crystals up to 3/4" across with coarse feldspar. Magnetite also occurs in disseminated form in fair quantity in syenites just south of the crest of Mt. Copeland.

The important mineral, molybdenite, is almost entirely confined to the metamorphosed quartzose carbonate adjacent to the carbonate beds. This unit is now a skarn composed of calcite, dolomite, fine-grained garnet, medium- to coarse-grained mica, and coarse- to very coarse-grained diopside in large lenticular masses and clusters of coarse crystals. The molybdenite seems to be associated with the coarse diopside. It has the form of blebs and masses up to 2" in diameter, but it also occurs as lenticular masses sub-parallel with bedding. In places, these masses cover fracture planes over areas as much as 2' across with a thickness of 1/8". Exceptionally high grade molybdenite is found in intervals from 6" to 1' thick, and of lower grade over as much as 20' of beds in finely disseminated blebs and specks. Molybdenite forms a rim around diopside crystals in many places. In others, it is scattered at random in the skarn. The high grade skarn occurs fairly consistently a few feet from the syenite from GW-15 west. This may not have much significance as far as the syenite is concerned because equally good,or even better, uccurrances as at GW-5 do not seem to be directly related to crystalline rocks.

Molybdenite was found in the syenite at only one place, that is just west of GW-3. In that locality, blebs and masses of molybdenite are disseminated in a thin tongue of syenite which extends into a biotite-amphibole schist

It is not known what the genesis of the molybdenite is. There is no clear relationship between it and the crystalline rock although the processes which formed the crystalline rock may have changed its distribution. Other possibilities to consider are, that the molybdenite is hydrothermal and that it accumulated at some early stage, or that it is an altered syngenetic deposit. The ability of molybdenite to resist weathering could be cited as support for the last hypothesis.

Considerable further work must be done before one of the above or some other hypothesis should be selected as the most likely for the accumulation of the molybdenite.

Structure

An interpretation of geologic structure is necessary in the development of an exploration policy to evaluate the mineral deposit. Unfortunately much of the data necessary to understand structure will be obtained by exploration and may be available at a rather late stage.

The strata which includethe molybdenite seem to have the form of a syncline whose axial plane dips to the south west as shown on the map accompanying this report. This idea is supported by the configuration of some of the beds and their repetition in reverse order at the east end of the feature. Examination of the north slopes of Mt. Copeland from a helicopter and from the north side of Copeland valley reveals that there are two sets of folds. One set is isoclinal and recumbant with a nearly horizontal axial plane. A fold of this set is well exposed at about 6000'on the west end of the north side of Mt. Copeland. There, it outlined by quartzites. Another member of the same set is visible to the East of the Joan Group at a similar elevation. Unfortunately it was not in a place where the helicopter could land to permit a closer examination. However, it did appear to have a nearly horizontal axial plane.

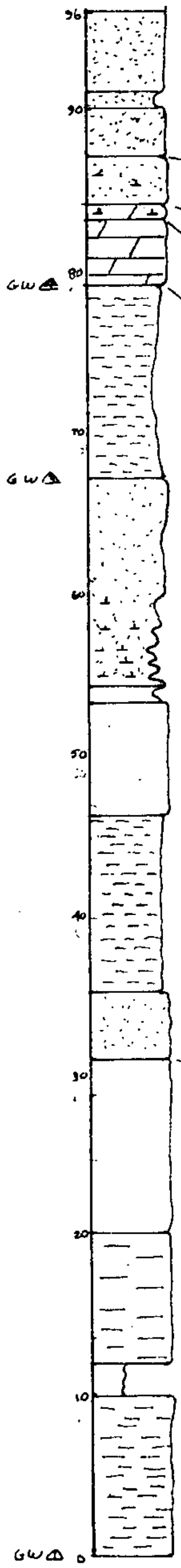
The other set of folds has a south-east trend and is more open. Dr. J.T. Fyles of theB.C. Dept. of Mines thinks that the isoclinal recumbent folds are older (personal communication).

George A. Wilson, P.Eng.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA G. A. WILSON

Expiry Date: August 4, 1966

SECTION 1



Covered by snow

Sandstone; grey, weathering brown to red-brown fine grained quartzose. Py and Po in streaks and lenticles parallel with bedding.

Sandstone; soft friable, with hard siliceous lenses.

Sandstone; Yellowish brown, wthrg red-brown, trace Po., thinly bedded, to 2", beds with thin lam, abundant brown mica.

Impure sandstone; mauve, weathering red-brown, coarse grained, re-crystallized, garnet, mica, quartz, diss. MoS_2, Py + Po in streaks, diss magnetite.

Dolomite; grey-brown, weathering brownish grey, re-crystallized, coarse grained, calcareous, siliceous, abundant mica, garnet, sparse Po, + Py Traces MoS_2.

Dolomite. white, weathering, yellow-white, massive, some beds with abundant biotite, coarsely crystalline, garnet is common, thickness varies + is absent in places.

Biotite amphibole schist; dark green weathering similar Foliation is parallel with bedding

Sandstone; grey, weathering to a shiny blue-black colour, fine grained, quartzose, partly altered to quartz + mica, partly calcareous, much re-crystallized. Traces magnetite.

Marble; grey, pyritic, discontinuous.

Diorite? ex quartzose sandstone; grey weathering grey to blue-grey, granular, quartz, plagioclase, mica, traces $CaCO_3$

Biotite-amphibole schist: dark green with abundant grey quartzose bands; thinly laminated with lighter beds. Probably ex interbedded quartz sandstone and shale.

Sandstone; grey weathering similar, quartzose, granular, altered and re-crystallized, biotite laminated parallel with beds; abundant irregular patches and masses of limestone and arenaceous limestone.

Syenite; Grey, weathering pinkish grey, feldspars 70% ±, mica-amphibole 30% ±, nepheline? 5%.

Paragneiss: grey with lighter and darker streaks, dark streaks + laminae, biotite amphibole schist; lighter streaks, coarse feldspar with amphibole and magnetite.

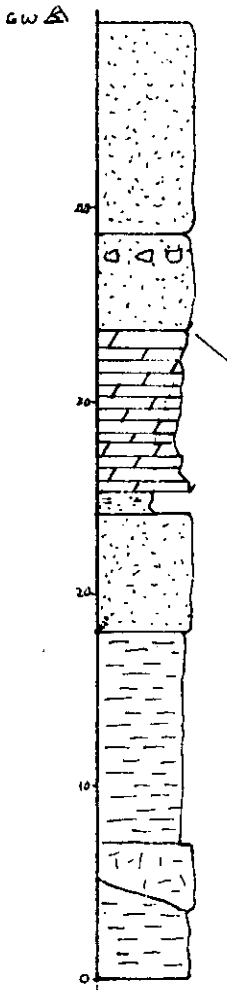
Covered

Biotite-amphibole schist; quartzose, thin laminae, patches of coarse to v coarse dolo + feldspar.

Section measured from G-W△ to △ and off set to △ where it was measured to SW ⊥ beds. Tops of beds not implied by diagram. The top of the section as drawn is toward the axial plane of the syncline type fold

Scale 1" to 10' — G.A.W

SECTION 2



Sandstone; grey to yellow-grey, weathering yellow-brown to brown, fine grained, granular to mosaic fabric; beds 1' to 2' thick with 1/16 to 1" laminae; probably had calc shale partings now altered to lime silicates and garnet-mica marble. Small bedding plane faults. Py & Po throughout. MoS_2 in disseminated blebs to 1/8" sparse in upper part as drawn.

Sandstone as above but with lenticular intervals of coarse to very coarse diopside with biotite. One such band has abundant masses MoS_2 from 1/16" to 1" diameter. MoS_2 & Py; Po forms rims around some diopside xls. In lower part MoS_2 is assoc with carb stringers or as disseminated small blebs.
See Note below:

Dolomite; white, weathering yellow-grey, coarsely crystalline, massive, barren, variable thickness due to deformation.

Sandstone; yellow-grey, weathering yellow brown, calcareous, schistose, interbeds bio amphibole gneiss

Sandstone; grey to dark grey, weathers dark brown, hard, quartzose, fine grained, thinly laminated, sparse interbeds biotite-amphibole gneiss

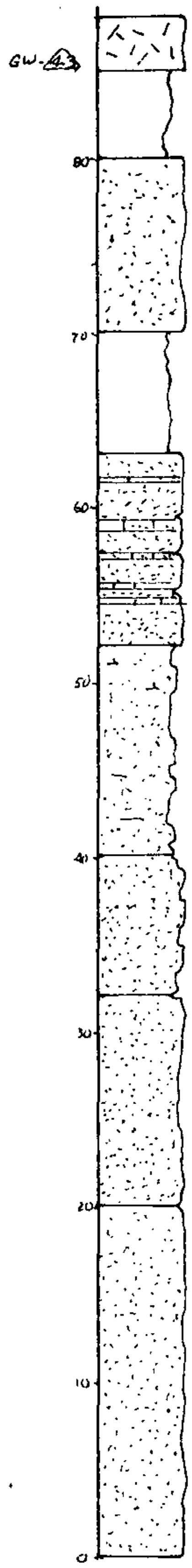
Biotite-amphibole schist; dark green weathering similar. Abundant porphyroblasts sillimanite? Within this unit there is a light grey banded gneiss of approximate syenite composition, which widens from 6" some 30' east of the line to 10' some 45' west of line of section. Banding within the tongue of crystalline rock conforms to bedding in surrounding beds. The upper contact as plotted conforms to bedding; the lower one crosses beds at a low angle.

Section measured from GW△ south across south limb of syncline and plotted so that south end of section is at bottom and north end is at top.

Note: In second unit from top there is a tongue of grey banded crystalline gneiss just above molybdenum beds as plotted. This tongue expands to east so that it includes some 50' of beds below white dolomite. It is similar to dioritic type in outcrops down slope and to east of GW△ △

Scale 1" to 10' S.Q.W.

SECTION 3



Covered by snow

Nepheline syenite: grey weathering darker, nepheline? 15%, feldspars 60%; mica 25%

Carbonate; grey to brown grey weathering more brown, some bands to 6" pure carb otherwise quartzose, micaceous & with bn & pink garnet.

Sandstone; grey weathering grey, fine to medium grained, slightly calcareous, iron stained bands and stringers parallel with bedding. Sulphides Py, Po, MoS_2. MoS_2 is assoc y-bn alteration in which it occurs as blebs and thin lenticles.

Carbonate; grey to dark grey, weathering; yellow brown to dark brown. medium grained, re crystallized, quartzose, Py, Po.

Sandstone; 30%; interbedded with; limestone 30%, quartzite 40%

Sandstone; grey to dark grey, weathering Brown-grey, medium grained, calcareous, Po & Py

Limestone; grey, weathering grey, to clear grey, medium to coarsely crystalline in thin laminae to 1/4"

Limestone; grey, weathering brown, quartzose, Py - Po - Mag.

Quartzite; grey to dark grey, weathering dark red-brown hard, tends to be in lenticles 8" × 3,' coarse epidote in discontinuous bands and lenticles at top.

Sandstone; grey and quartzite grey, weathering dark brown to yellow brown, in part slightly calcareous, argillaceous bands near top, bedding fairly massive. Finely disseminated Py & minor Po

Sandstone; similar to unit above but with more quartzite. in beds to 6" wide, white weathering grey.

Sandstone; grey to pale mauve, weathering darker, calcareous, some beds with abundant brown mica, some with masses of green epidote, bedding massive with thin laminae 1/4" to 1"

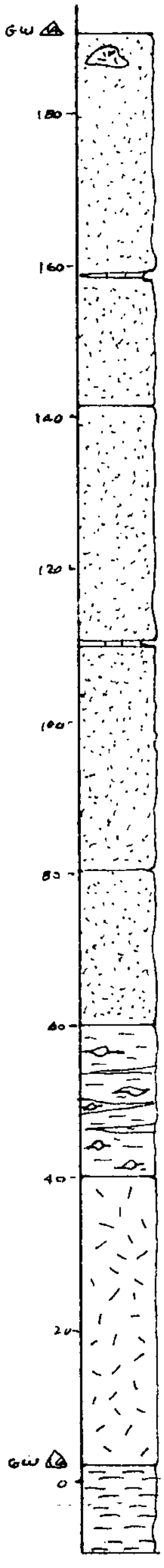
Quartzite and sandstone; grey weathering grey, and in places dark brown, to very dark brown, hard Bedding characteristics and composition appear to change considerably along strike. This may be due to extent to which faces are exposed to or protected from abrasion by ice instead of entirely to changes in deposition environment although such changes are also present.

Snow.

Section measured down slope to north east on north limb of syncline shaped fold.

Scale 1" to 10' GAW

SECTION 4



Snow

Sandstone; grey to mauve, weathering brown, generally fine grained but with medium grained beds, interbeds of marble; white weathering yellowish gre to yellowish brown. Sparsely mineralized with py & Po. Deformed along Fault with str 175°. Masse coarse white pegmatite neartop

At base of this unit line of section offset 90'W.

Sandstone; grey to yellow-grey weathering brown, fine grained, altered, slightly schistose.

Marble; grey weathering yellow grey, 1" thick.

Line offset to east 110' at base of unit

Sandstone: mauve, weathering dark brown with red hue, faintly schistose with plane of schistosity parallel bedding.

Mixed biotite-amphibole schist and grey gneissic syenite, as below. Colour is intermediate to biotite amphibole schist and grey crystalline syenite below. Abundant coarse feldspar augen in both components.

Syenite: grey to light grey, weathering brown-grey, dominantly feldspar with biotite-hornblende? rich bands. Foliation parallel with relict bedding. Thickness varies along strike.

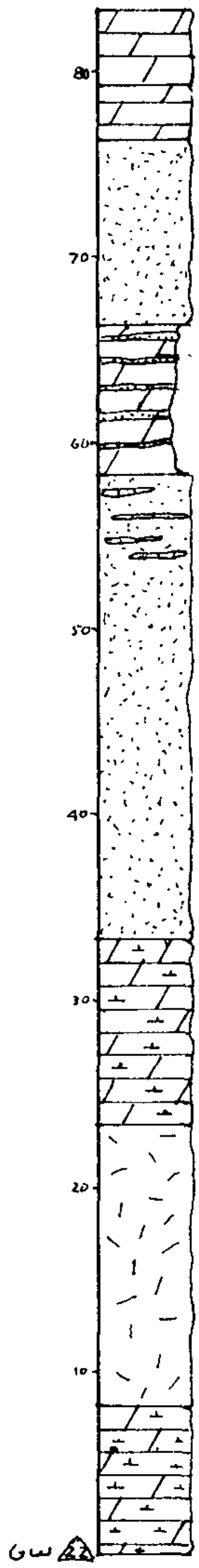
Biotite-amphibole schist; dark greenish grey weathering similar, abundant chlorite, grey syenite stringers parallel with bedding.

Snow

Section not measured on continuous outcrop over intervals 0-93, 93-143; 143-191

Scale 1" to 20' G.A.W.

SECTION 5



Snow

Dolomite; yellowish brown, weathering more yellow coarsely crystalline.

Dolomite; as above but fine-grained with tongues of aplite? fine-grained, mauve, with phenocrysts or porphyroblasts of feldspar to 1/8"

Sandstone; mauve, weathering dark brown, fine-grained, quartzose, magnetite, Py, Po, min'n.

Interbedded crystalline Dolomite 70% + sandstone 30%

Dolomite; light grey, weathering tan, to yellow-brown, in upper beds abt lenticular masses of qtz + feldspar, + amphibole, pegmatite parallel with beds.

Sandstone: grey weathering brown grey, fine-grained quartzose

Sandstone; grey to mauve, weathering brown, fine-grained, quartzose, weathered to very dark brown in parts, carbonate lenses and stringers near top. Magnetite, po. mineralization

Calcareous dolomite; dark grey, weathering yellow-brown, finely crystalline. This unit varies in thickness from 4' to 15'. A large mass of unit above has been forced down to unit.

Syenite; grey weathering similar, medium-grained.

Calcareous dolomite; grey with brown + green flecks, weathering tan, abundant brown mica, sparse garnet; this unit resembles the recrystallized carbonate on the north limb of the syncline shaped fold

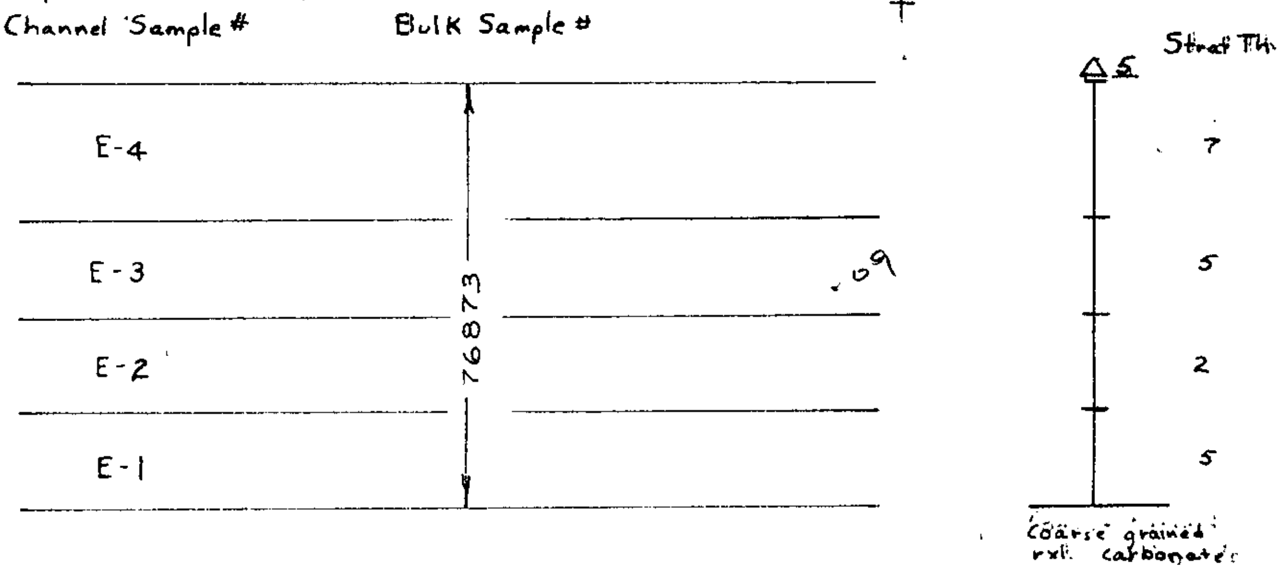
Snow

All units have variable thickness, probably due to stresses involved in folding. To east of this section most of equivalent interval is nepheline syenite.

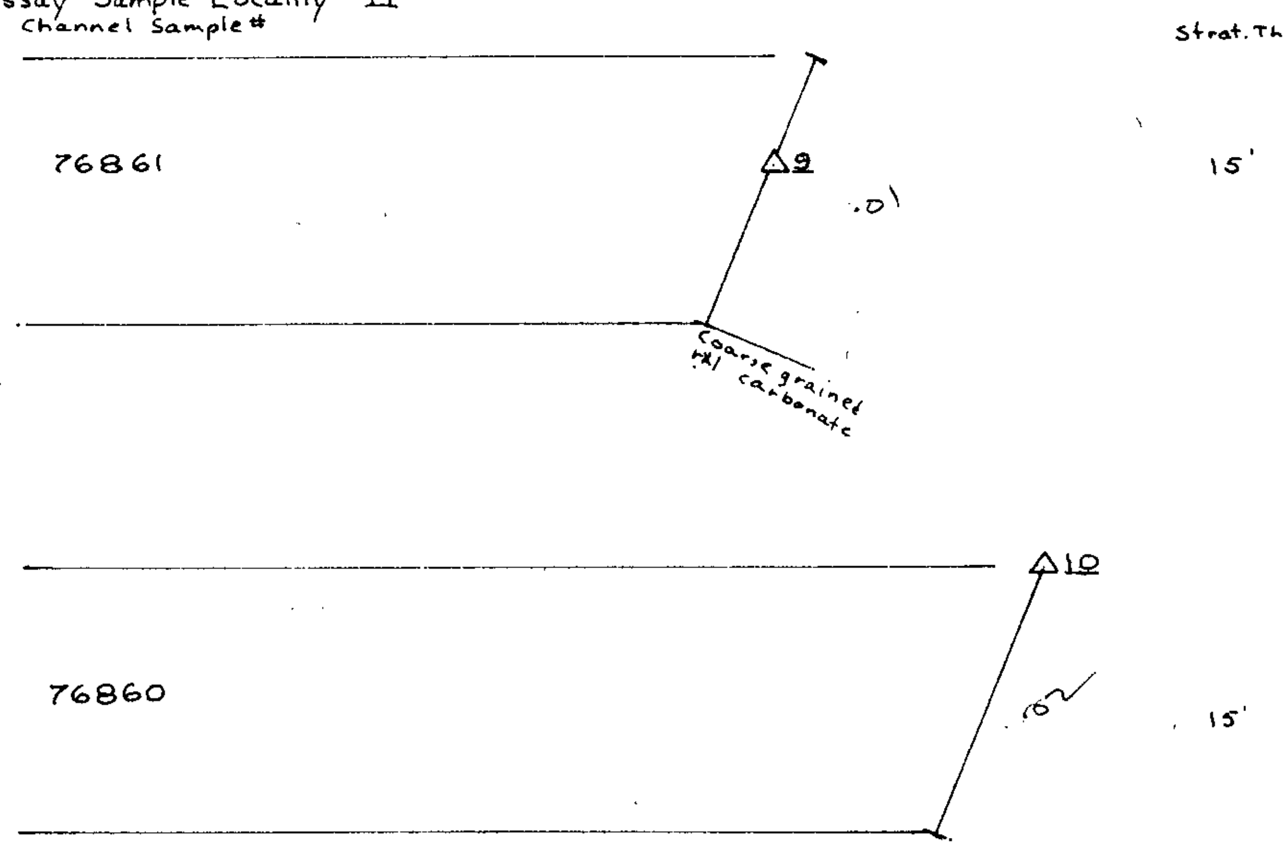
Scale 1" to 10'. G.A.W.

Appendix 2

Assay Sample Locality I



Assay Sample Locality II



Scale 1" to 10'

GAW.

Assay Sample Locality III

Channel Sample #	Strat Th
E-5	5
E-6	5
E-7	5

15'

Scale 1" to 10'

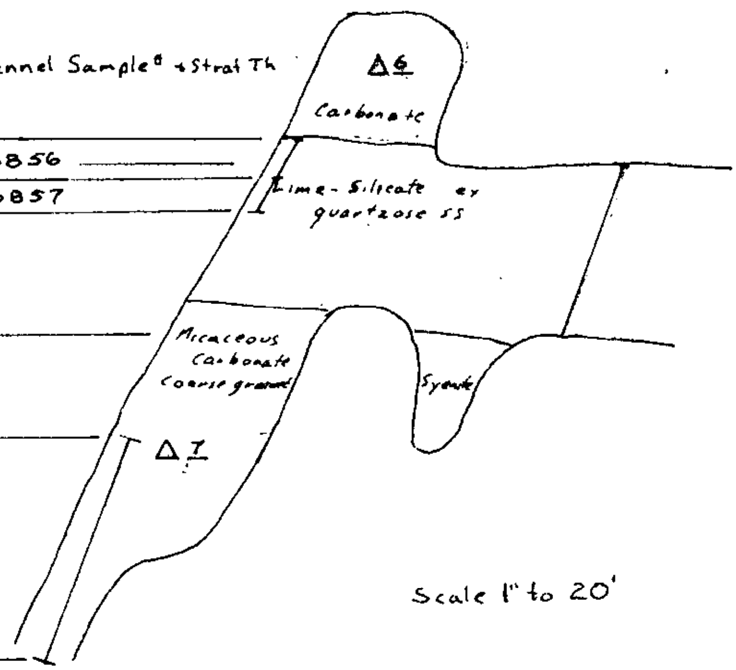
Assay Sample Locality IV

Bulk Sample #

76874 .03

76875 .05

Channel Sample # + Strat Th



Scale 1" to 20'

Assay Sample Locality V

Channel Sample #		Strat Th
76858	3.77	5
76859	1.32	6

GAW

Assay Sample Locality VI

Channel Sample #

76872

Strat Th

24

15

Scale 1" to 10'

Assay Sample Locality VII

Channel Sample #

76863

76862

Strat th

5

5

15

Scale 1" to 10'

Assay Sample Locality VIII

Channel Sample #

76865

76864

Strat Th

5

5

18

Scale 1" to 10'

Assay Sample Locality IX

Channel Sample #

76867

76866

Strat th

5

5

19 Scale 1" to 10'

SAW

Assay Sample Locality X

Channel Sample #

Strat Th.

76869 — 10

76868 — 10

△ 20

Scale 1" to 10'

Assay Sample Locality XI

Channel Sample #

Strat Th.

76871 — 20

76870 — 15

△ 21

Scale 1" to 10'

Assay Sample Locality XII

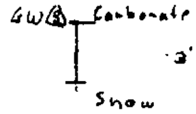
Channel Sample #	Slope Dist.	Strat Th.
92351	0–11	7
92352	11–22	10
92353	22–33	8
92354	33–47	11
92355	47–62	12
92356	62–80	14
92357	80–94	13

Assay Sample Locality XIII

Channel Sample.

E-8

Strat. Th.



Scale 1" to 10'

G.A.W.

Appendix 3.

PHONE 469-2391
(24-HOUR SERVICE)

ATLAS TESTING LABORATORIES LTD.

INDUSTRIAL AND RESEARCH CHEMISTS
TESTING AND INSPECTION SERVICES

7911 ARGYLL ROAD
EDMONTON, ALBERTA

August 2, 1965.

Geological Consultants Ltd.,
104 Waterloo Drive,
CALGARY, Alberta.

Lab No. 1189

Attention: Mr. George Wilson, P.Eng.,

Dear Sir:

The ore samples received July 26, 1965, assayed as follows:

Sample No.	Molybdenum	Copper	Lead	Zinc
E - 1	.09	.02	trace	.65
E - 2	.18	.03	trace	.45
E - 3	.49	.05	trace	.30
E - 4	.04	.03	trace	.50
E - 5	.11	.02	trace	.50
E - 6	.02	.02	trace	.45
E - 7	.07	.03	trace	.40
E - 8	5.03	.03	trace	.75

Yours very truly,
ATLAS TESTING LABORATORIES LTD.

J. O. Garner

J.O. Garner,
Head Assayer.

JOG/bb

FORM NO. 8

To:

Mr. George A. Wilson,

104 Waterloo Drive,

Calgary, Alta.

Certificate of Assay

COAST ELDRIDGE

ENGINEERS & CHEMISTS LTD.

125 EAST 4TH AVE. VANCOUVER 10, CANADA

ACCTLC Member Canadian Testing Association

PHONE: 8 4111

CABLE ADDRESS "ELDRICO"

FILE NO. A.3-W.1-65 18599

DATE August 9, 1965

We Hereby Certify *that the following are the results of assays made by us upon submitted* Ore *samples*

MARKED	GOLD		SILVER	Lead(Pb)	Zinc(Zn)	Copper(Cu)	Molybdenum (MoS_2)		
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
76856		$		Trace	Trace	0.07	0.13		
76857				0.10	0.05	0.05	0.04		
76858				Trace	Trace	Trace	3.77		
76859				Trace	Trace	0.02	1.32		
76860	Trace		Trace	Trace	0.05	0.04	0.02		
76861	Trace		Trace	Trace	Trace	0.05	0.01		
76862			Trace	0.05	0.12	0.04	0.26		
76863			Trace	Trace	0.05	0.04	0.09		
76864				0.07	0.02	0.04	0.31		
76865				Trace	0.07	0.04	0.05		
76866				0.05	0.05	0.02	0.34		
76867				0.05	Trace	0.01	0.04		
76868				0.10	Trace	0.01	0.24		
76869				Trace	Trace	0.02	0.30		
76870				Trace	Trace	0.05	0.03		
76871				0.05	Trace	0.02	0.04		
76872				0.05	Trace	0.02	0.45		

Gold calculated at $ .... per ounce

Note. Rejects retained one week.
Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gains inherent in the assay process.

H. Sharples *Provincial Assayer*

FORM NO. 8

PHONE: 8 4111

CABLE ADDRESS "ELDRICO"

ACCTLC Member Canadian Testing Association

FILE NO. A.3-W.1-65 18875

DATE August 19, 1965

To:

Mr. G.A. Wilson

104 Waterloo Dr.,

Calgary, Alta.

Certificate of Assay

COAST ELDRIDGE

ENGINEERS & CHEMISTS LTD.

125 EAST 4TH AVE. VANCOUVER 10, CANADA

We Hereby Certify *that the following are the results of assays made by us upon submitted* ore *samples*

MARKED	GOLD		SILVER	Lead (Pb)	Zinc (Zn)	Copper(Cu)	Molybdenum (MoS_2)		
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
		$							
G.W8				Trace	Trace	0.02	1.12		
76873				Trace	Trace	Trace	0.60		
76874				Trace	Trace	0.02	0.03		
76875				Trace	Trace	0.05	0.05		

Gold calculated at $...................per ounce

Note. Rejects retained one week.
Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gains inherent in the assay process.

H. Sharp *Provincial Assayer*

SECTION 6

Sandstones: grey to yellowgrey weathering brown, fine- to medium-grained, pyrite, pyrrhotite mineralization, partly deformed by faults.

Interbeds marble at points marked x

Transition between units above & below.

Syenite; grey, gneissic

Biotite-amphibole schist
Covered with snow

Biotite-amphibole schist; dark green, weathers green, pitted weathered surface. Inter-bedded syenite as below in 5' to 10' units

Syenite; grey weathering similar, fine-to-medium-grained grades to dark green biotite-amphibole schist to east.

Quartzose paragneiss: pinkish grey weathering similar; lacks feldspar eyes of unit below.

Quartzose paragneiss; pinkish grey, weathering similar, large pink feldspar eyes to 3", coarse to very coarse interbeds 1" to 6" of dark green biotite-amphibole schist; grades into unit below

Granite; grey with pink tint, weathering lighter tan, medium grained, plagioclase 40%, orthoclase 20% mica 20%, quartz 20%.

Biotite-amphibole schist; dark grey-green, weathering similar

Quartzite; light grey weathering grey
Dolomite; white weathering yellow-brown, very coarse grained
Quartzite: grey brown, weathering dark grey; interbedded quartz-chlorite schist
Calc. dolomite; tan, weathering yellow-brown, medium to coarse-crystalline
Calc. dolomite; tan, weathering yellow-brown, medium to coarse crystalline.
Quartzite; mauve to grey weathering lighter, massive
Interbedded calc. dolo & altered sandstone: calc. dolo; grey to white weathering tan, medium- to coarse crystalline sandstone: grey weathering tan, converted to sillimanite? mica schist, strata repeated by small folds
Chlorite-mica-amphibole schists; brown to brown-green, in part with abundant iron stain.

Sandstone; yellow-grey, weathering similar; fine-to medium-grained, contorted, subsidiary folds indicate upper southerly beds moved up & N relative to lower beds
Limestone; grey weathering yellow-grey, in laminations to ?", interbedded with sandstone. Limestone : Sandstone ≅ 1:1.
Biotite-amphibole-chlorite schists: dark green weathering similar

Quartzite: white to grey to mauve weathering to yellow-grey to dark grey interbedded with chlorite schist ex arenaceous shale. Beds to 6' much contorted to subsidiary folds, axial plane str 100°, Dip 45°SW, plunge 70°SW.
Biotite-amphibole-chlorite schist; dark green weathering darker

Covered; rubble on surface consists of grey quartzose gneiss similar to unit 15

Covered; underlain by unit below

Paragneiss; grey to brown grey weathering brown, micaceous, similar to unit 15. In part quartzose, boudinage structure in some hard quartzite beds.

Diorite gneiss; grey weathers grey, fine- to medium-grained, slightly granular, banded.

Paragneiss; grey to browngrey, weathering rusty brown, schistose, micaceous, porphyroblastic with abundant white quartz, Partly covered.

Schistose sandstone grey to browngrey, weathering red-grey to brown-grey, quartzose, quartz eyes and lenticles 3/4 x 3" abundant in upper 6' but decrease down and are absent in center. Lower part has sillimanite? porphyroblasts.

Quartzite; white to grey weathering yellow grey to white. silt to sand size, bedding generally massive with thin laminae but thin bedded in part.

Paragneiss; green grey, weathering similar, quartzose chloritic.
Quartzite; pink to grey, weathering grey, to brown-grey. beds massive to 5' thick with thin laminae.

Paragneiss: green grey, weathering similar, qtz, chlorite, probably derived from aren. shale. lower part covered but debris indicates interbedded thin slabby quartzites
Quartzite: white, weathering grey, medium to coarse grained massive.

Interbedded quartzite as above and sillimanite? gneiss. grey, weathering darker.

Quartzite; white to grey, weathering grey, most is massive, sparse interbeds of paragneiss.

Paragneiss; grey with brown tint, weathering grey as below interbedded with quartzite as above.
Paragneiss; grey with brown tint, weathering grey, alternate laminae rich in qtz or mica, brown,
Quartzite; white to grey, weathering brown-grey, massive.

Covered; partly underlain by contorted quartzite
Quartzite; white, weathering light grey with interbedded paragneiss.
Paragneiss. similar to unit 5

This unit at base of section is at or very near axial plane of syncline-like fold. The quartzites are duplicated down slope.
Units 25 to 39 are probably same beds as unit 20 on opposite sides of a syncline-like fold with axial plane near centre of unit 24.

Scale 1" to 100'

—G.A.W.

To accompany geological report by George A. Wilson, P.Eng., on the Joan, Bea and Web groups on Mt. Copeland, Revelstoke, M.D., Dated August 28/65

SKETCH MAP
of
JOAN and BEA GROUPS
Based on topographic maps, air photographs and tape and compass.
Scale
0 100 200 300 400 500
LEGEND
GEOLOGY
Sedimentary Strata and Paragneisses.
6 Quartz-mica schist
5 Quartzite
4 Lime-Silicate beds
3 Quartzose sandstones
2 Marble
1 Biotite-amphibole schist
Crystalline Rocks
d Late Basic dykes
c Pink Syenite,
b Nepheline Syenite
a Syenite, Grey to pink grey
SYMBOLS
Bedding attitude
Foliation
Fold axis, Anti/Syncline
Fault
7000 Contour
Control Station
7000 Contour line
II Assey Sample location
Joan 5 / Joan 1 Claim Line and claim name
George A. Wilson P.Geol; Eng.
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 679 MAP #1
Scattered outcrops
Snow
Snow and Moraine
Talus
Moraine
Post #1 Joan 1 Joan 2 Joan 3 Joan 4
679
To accompany geological report by George A. Wilson, P.Eng, on the Joan, Bea, and Web groups on Mt Copeland Revelstoke M.D., Dated August 28/65.
M2