820069

CORPORATION FALCONBRIDGE COPPER

6415 - 64th Street, Delta, B.C., Canada V4K 4E2 Tel. (604) 946-5451

October 12, 1983

Mr. T. Barkley
Box 1513
Parksville, B. C.
VOR 2SO

Dear Mr. Barkley:

I return to you herein the original data on the Jensen properties at Usk that you sent to me in your letter of October 4. The area and data on the claims is clearly of interest. However, our priorities are such that we cannot assume commitments in this area at the present time. We expect to have a field crew in Terrace next season and will contact you at that time. Thank-you very much for contacting Falconbridge Copper.

Sincerely,

D. Watkins

Exploration Manager
Western Canada

xc: AJD

BAR - B EXPLORATION
SYNDICATE
Box 1513
Parksville, B.C. V0R 2S0
PHONE: 248-5871

Parksville, B.C.
Box 1513
V0R 2S0
Oct. 4 / 83

Mr. Dave Watkins,
Falconbridge Copper,
6415 - 64th Street,
Delta, B.C.

Dear Dave:

Please find enclosed map and assay reports on the Jensen properties at Usk, B.C.

I would personaly recommend you take a serious look at these properties.

Yours truly
T. Barkley

P.S. Please copy and return the originals,
Thank you.

Yellow denotes Jensen claims.

TO WE

BRUSK 1
4077(7)

CORDILLERA

RESERVED MINERAL & PLACER O/C 2108 JULY 5 1968

I.R. 1

Kitselas Canyon

Hankin Cr.

Singlehurst Cr.

KING
1988(8)
26516

KLEANZA CREEK PARK

Whitlow

MISTY
3659
(4)

BLOW 2
3044
(8)

BLOW 3
3045(5)

BLOW
1754(5)
43006

4K-3
(8)

NOBEL 4
4108(8)

NOBEL 2
4106(8)

NOBEL 3
4107(8)

NOBEL 1
4105(8)

NOLLE 6
4110(8)

Whitlow R.

Noble Five Cr.

1274(8)
L6715

KIRSTEN
4054(6)

1276(8)
L6749

1278(8)

LARA
4055
(6)

1275(8)
L6748

1277(8)
L6750
49974

1273(8)
L6714

MIEFFER
4218(9)
(25 x 1W)

1272(8)
L6713

Noble Five L.

HANS
4217(9)
(35x3E)

BULKEY

Valhalla Cr.

GV 2
3637(2)

Valhalla L.
(2)

NELSON
1359(8)
34057

KLEANZA MTN.

RESERVED MINERAL & PLACER OC 2108 JULY 5 1968

Hankin Riffle

Fall Cr.

Newtown Cr.

I.R.4

C.N.R.

Kitselas

GEM 5
1602(12)

GEM 6
1603(12)

GEM 3
1600(12)

GEM 4
1601(12)

GEM 1
1598(12)

GEM 2
1599(12)

FALL 1
3334(10)
(45X 2E)

GOLD
553(3)
26661 Vw

QUARTZ
386(6)
26573

I.R.5
Copper River

LA TOSCA PTARMIGAN

RANGES

RANGE

EDITH
2507(8)

KINO 12
3857(6)

KINO 10
3855(6)

KINO 8
3864(6)

ALSO: SIILO
3052(5)

KINO 6
3862(6)

KINO 11
3856(6)

KINO 9
3858(6)

KINO 7
3863(6)

KINO 5
3861(6)

1774(5)

KINO
82(8)
26514

KINO 2
3858
(6)

KINO 4
3860(6)
ALSO:
KINO 1-9
2613-2820(6)

KINO 3
3859
(6)

1775(5)

KINO 20
4361(10)
(45X 4W)

Kendall Cr.

Kleanza Cr.

LMS
2859(6)

B.R.B.
HOPEFULL
1690(4)

ANNETTE

Mike Cr.

O.K.

O.K. Creek

RANGE

Dardanelle Cr.

Taylor Cr.

Taylor R.

LITTLE CANYON

SCOOP 1
4559(4)

COPPER MTN.

RFS MIN. & PLACER
2 MILE EITHER SIDE
O/C 2401, 16. JULY 70
RELEASE FOR STAKING

SKEENA M.D.

TAYLOR M.D.

54°30'

128°30'

128°15'

TO SOUTH SEE MAP 103 I/8 W

TO EAST SEE MAP 103 I/7 E

Miles 1 .5 0 1 2

Metres 1000 500 0 1000 2000 3000

Kilometres 1 0 1 2 3

2 Miles

3000 Metres

3 Kilometres

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

DATE OF MICROFILM: 82.06.10

103 I/7 E

For up-to-date information on

DEPARTMENT OF MINES AND PETROLEUM RESOURCES

TO NORTH SEE MAP 103 I/16 W

128°45'

54°45'

M1031/9W

(FOR PLACER SEE P 1031/9W)

TERRACE-BELL 4
1939 (8)
(00502)

388 (3)

THE PIT I
1677 (3)

THE PIT II
1678 (3)

THE PIT III
1679 (3)

THE PIT IV
1680 (3)

Sand Cr.

Carpenter Cr.

Legate Cr.

CARP
4326(10)
(2NW X 5E)

Hardscrabble Cr.

Pitman

GROTTO GROUP

CHIMO
4328 (10)
(4S X 4W)

River

Handsrabble Riffle

Ste. Croix Cr.

SHAN 1 1604 (1)

SHAN 2
1605 (1)

RANGE

SAK 5
1606 (1)

SAK 7
1608 (1)

SAK 3
924 (3)

SAK 2
923 (3)

SAK 1
922 (3)

SAK 4
925 (3)

SAK 6
1607 (1)

Shannon Cr.

AXE
1658(3)
45011
(3NX3W)

I.R. 2A

I.R. 2

ELMO 1
1739(5)

ELMO 2
1740(5)

Mannix Cr.

Thumbling Cr.

Lowrie Cr.

NASS

Usk

C.N.RLY.

Skeena

TOULON GROUP

COPPER CLIFF 81
4338(10)
(4S X 5E)

Chimdemash Cr.

BORNITE MTN.

KITSELAS MTN.

BRUSK 1
4077(7)

BERDILLERA

RESERVED MINERAL & PLACER O/C 2108 JULY 5 1968

I.R. 1

Kitselas Canyon

Hankin Cr.

Skeena

KING
1988(8)

KLEANZA CREEK PARK

Whitlow

Whitlow L.

BLOW 2
3044 (8)

BLOW 3
3045(5)

BLOW
1754(5)

MISTY
3659
(4)

NOBEL 4
4108(8)

NOBEL 2
4106(8)

NOBLE 3
4107(8)

NOBLE 1
4105(8)

NOBLE 6
4110(8)

Noble Five Cr.

Noble Five L.

Valhalla Cr.

Valhalla L.

KIRSTEN
4054(6)

LARA
4055
(6)

MIFFER
4218(9)

HANS
4217 (9)
(3S X 3E)

NELSON
1359 (9)

KLEANZA MTN.

BULKEY

Hankin Riffle

Fall Cr.

RESERVED MINERAL & PLACER O/C 2109 JULY 5 1968

I.R. 4

Kitselas

C.N.R.

Newtown Cr.

GEM 5
1602(12)

GEM 6
1603(12)

GEM 3
1600(12)

GEM 4
1601(12)

GEM 1
1598(12)

GEM 2
1599(12)

FALL 1
3334 (10)
(4S X 2E)

GOLD
553 (3)

QUARTZ
386(6)

I.R. 5
Copper River

EDITH
2507(8)

LA TOSCA PTARMIGAN

RANGES

RANGE

KINO 12
3857(6)

KINO 10
3855(6)
ALSO:
S11D
3052(5)

KINO 8
3864(6)

KINO 6
3862(6)

KINO 11
3856(6)

KINO 9
3858(6)

KINO 7
3863(6)

KINO 5
3861(6)

1774(5)

KINO
82(8)

KINO 2
3858
(6)

KINO 4
3860(6)
ALSO:
KINO 1-9
2613-2820(6)

KINO 3
3859
(6)

1775(5)

KINO 20
4361(10)
(4S X 4W)

Kendall Cr.

Mike Cr.

B.R.B.
LMS
2859(6)

B.R.B.
HOPEFULL
1690(4)

KLEANZA

O.K.

O.K. Creek

RANGE

SCOOP 1
4559(4)

LITTLE CANYON

Taylor Rd.

COPPER MTN.
RFS MIN & PLACER
2 MILE EITHER SIDE
O/C 2401, 16. JULY 70
RELEASE ORANGE

SKEENA M.D.

Dardanelle Cr.

54°30'

128°30'

TO SOUTH SEE MAP 103 I/8 W

128°15'

TO WEST SEE MAP 103 I/10E

TO EAST SEE MAP 103 I/9 E

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

Miles 1 0 1 2 3

Metres 1000 500 0 0 1000 2000 3000

Kilometres 1 0 3

DATE OF MICROFILM: 82.06.16

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.

For up-to-date information on DEPARTMENT OF MINES AND PETROLEUM RESOURCES

103 I/

EXHIBIT A

Province of British Columbia
Ministry of Forests
FOREST SERVICE

Date Nov. 25, 1981
Ref. Map 103:1:NE(b-4)
Base 103:1:9d,e
Scale 1 : 20000

Map Of SPECIAL USE PERMIT 9794

Outlined ——— Area _____ hectares ±

Forest Region Prince Rupert 02
District Kalum 05
Land District C.R.5

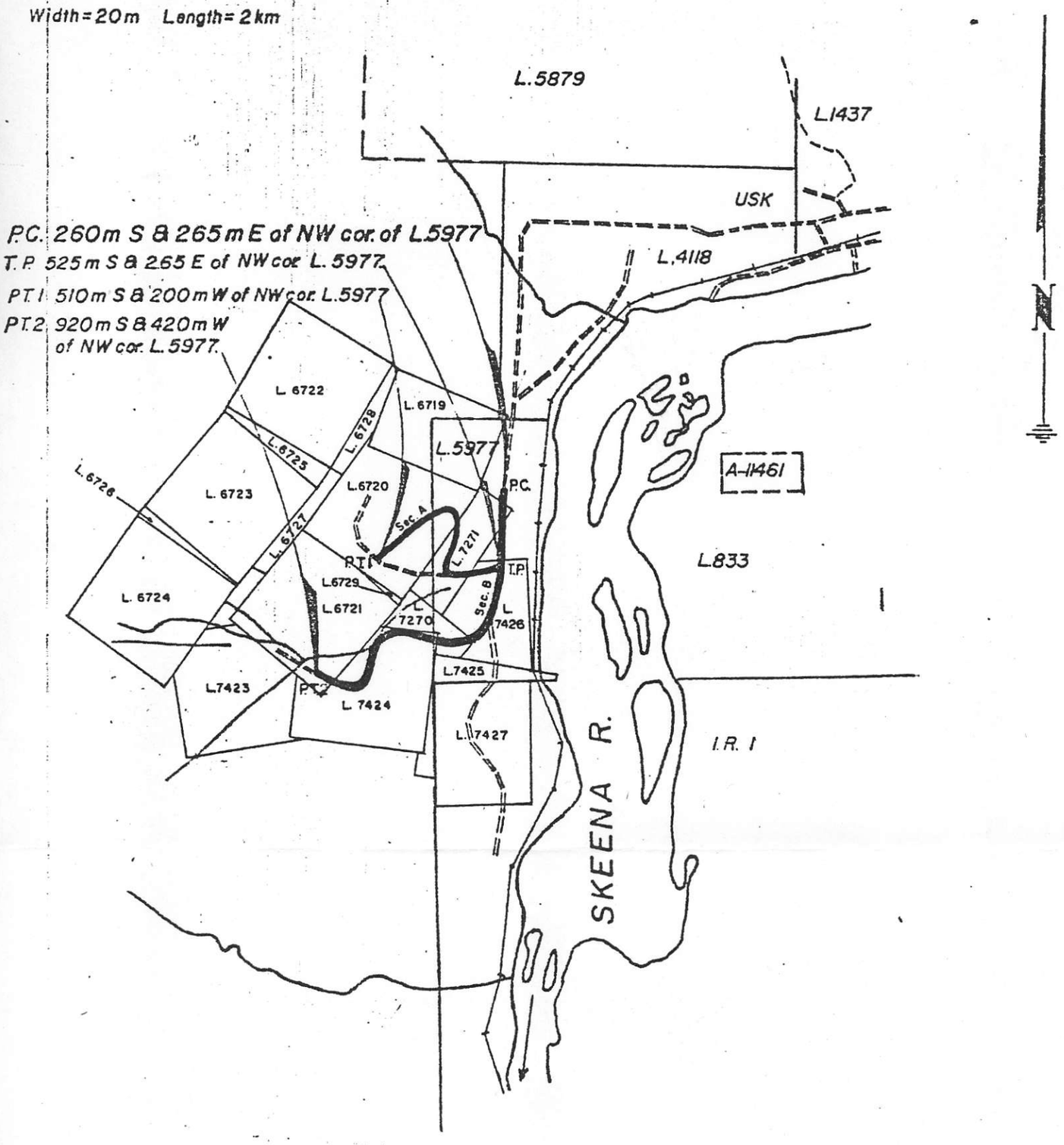
U.T.M. Grid

Zone	East	North	Reg.	Compt.	L
09	536300	6053000	065	028	

MANAGEMENT UNIT		TIMBER SUPPLY AREA		Pulpwood Agreement	Cascades	
Type	OZ	Number	II Kalum		East	
Number	75 Skeena	Block			West	✓
Block		Sub-B				

W. JENSEN

Width = 20m Length = 2km



M NO. 288

TO:

R & B Motors

4904 Highway 16 W.

Terrace, B.C.

Certificate of Assay

WARNOCK HERSEY INTERNATIONAL LIMITED

COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION

125 EAST 4TH AVE. VANCOUVER, B.C. V5T 1G4 CANADA

PHONE: (604) 876-4111
TELEX: 04-54360
ANSWER BACK: WHIVAN VCR

FILE NO. 462-0000-22230

DATE June 15, 1976

We Hereby Certify that the following are the results of assays made by us upon submitted Lucky Luke of Cordillero Group of 11 Claims ORE samples

MARKED	GOLD		SILVER	Copper					
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT (Cu)	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
		$							
	0.468		0.33	2.11					

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 gain inherent in the fire assay process.

Gold calculated at $ ..... per ounce

J. Meeke

Provincial Assayer

FORM NO. 288

TO:

Mr. Bill Jensen & [redacted]

P.O. Box 484

Terrace, B.C.

PHONE: (604) 876-
TELEX: 04-54360
ANSWER BACK: WHIVAN

Certificate of Assay

Watnock Hersey Professional Services Ltd.
125 East 4th Avenue Vancouver B.C. V5T 1G4

FILE NO. 461 – 23580

DATE November 23, 1977

Lucky Mine 2 Claims

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

MARKED	GOLD		SILVER		Copper	Total Molybdenum			
	OUNCES PER TON	GRAMS PER METRIC TON	OUNCES PER TON	GRAMS PER METRIC TON	PER CENT (Cu)	PER CENT (Mo)	PER CENT.	PER CENT.	PER CENT
	0.692		30.78		4.16	Trace			

one week.
e month.
nay be stored for a maximum
l arrangement.

y stated otherwise, gold
d on these sheets have
pensate for losses and
ssay process.

Ted M. Williams *Ted M. Williams* **Provincial Assayer**
Supervisor, Chemical Division

FORM NO. 288

TO:

Mr. C. Jensen

P.O. Box 484

Terrace, B.C.

Certificate of Assay

Warnock Hersey Professional Services Ltd.
125 East 4th Avenue Vancouver B.C. V5T1G4

PHONE: (604) 876-4111
TELEX: 04-54360
ANSWER BACK: WHIVAN VCR

FILE NO. 461 – 24343

DATE August 9, 1978

14" vein from Cardiford Claim

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

MARKED	GOLD		SILVER		Copper				
	OUNCES PER TON	GRAMS PER METRIC TON	OUNCES PER TON	GRAMS PER METRIC TON	PER CENT (Cu)	PER CENT.	PER CENT.	PER CENT.	PER CENT.
#1 – 2 pieces rock	~~Trace~~		~~Trace~~		~~0.08~~				
#2 – 4 pieces rock	0.25		4.0		13.54				

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 gain inherent in the fire assay process.

Isaac Wiebe *Provincial Assayer*

CASH PAYMENT RECORD

FOR PAYMENT OF CASH IN LIEU OF WORK AND/OR RENT WHEN WORK IS NOT RECORDED

I, WILLIAM A. JENSEN (Name) of BOX 484 TERRACE BC. (Address)

submit the sum of $ 220.00

to be applied as indicated hereunder, on mineral claims or leases located in the OMINECA

Mining Division, and which are held in the name(s) of:

Name	Address
WILLIAM A. JENSEN	BOX 484 TERRACE BC.
~~CLIFF CAILEY~~	DOGWOOD BAY - PARKSVILLE B.C.

holder(s) of Free Miner's Certificate(s) No.(s) 162853

Wm A. Jensen (Signature)

C/L in $	RENT in $	PENALTY PAID IN $	NAME OF CLAIM, LEASE, OR PML	No. of UNITS	RECORD NO.	MONTH OF RECORD
100	10		LA TOSCA			APR.
100	10		PTARMIGAN			APR
			Implement mine at 4700 marked 12 miles from airport at Terrace. These two recorded crown grants held in my name			
			430' shaft containing 2 adits mined in 1901 & 1902 samples of .04 AU 35-123 oz silver & .2 CU. both in good standing			
			Singlehurst mineral claims of some very rich veins on the property.			
				Wm A. Jensen		

CASH PAYMENT NO.

Sub-Mining Recorder
RECEIVED
APR 6 - 1978
88167-F $220.00
M.R. # ..... $ .....
TERRACE, B. C.
MR OR SMR STAMP

year and a short distance from this property a new seam is being opened up. This seam contains some high-grade blacksmith-coal and a small output will soon be marketed.

During the year grants were made from the Mines Development Fund to assist in building, improving, extending, or repairing a number of mining roads and trails in the district. Among the more important of such works were: Extensive repairs to the Cronin sleigh-road and the building of 1 mile of new road, linking this road up to the main road; extension from the McCabe trail on Driftwood creek to the *Victoria* group; extension from McCabe trail to the *Silver King* group; completion of Schufer trail on Hudson Bay mountain; trail from *Empire* group to Dahl Siding; continuation of work on Tahtsa River trail; extensive repairs to roads serving *Silver Standard* mine and mill; repair-work on the Manson–Fort St. James trail; laying-out of trail from Barkerville to Keithley Creek; repairs to Grouse Creek road; and a number of small grants where necessary.

Under the plan arranged by the British Columbia Department of Mines for assisting returned soldiers to prospect, five returned soldier prospecting parties were at work during the season in this district. Two parties examined country along the Skeena river, two parties were in the Peace River Division, and one party east of Ootsa lake. One party in the Peace River Division reported a successful season in finding some promising coal-seams, but no great success rewarded the efforts of the other parties.

OMINECA MINING DIVISION.

SKEENA SECTION.

CORDILLERA GROUP

Usk.

In the vicinity of Usk there was a considerable amount of mining activity during the season. In addition to certain mining-work, there were quite a number of prospectors out in the hills.

Kitsalas Mountain Copper Co

During the past four years this company has been developing the *Cordillera* group, situated 1 mile in a southerly direction from Usk. There are several quartz veins on the property which carry in places pay-shoots of bornite and some free gold. The property has been fully described in previous Annual Reports. The erection of a small concentrating-mill was practically completed in 1919, and during the summer of 1920 this mill was in operation for a time, with, it is claimed, satisfactory results. Ore from surface cuts was treated in the mill, but as yet no ore has been stoped from the underground workings. About 200 tons of ore was milled, producing about 20 tons of bornite concentrates, which, however, was not shipped during the year.

The milling machinery consists of a Blake jaw-crusher, Gibson grinder, amalgamating-plate, and a Wilfley table on which the tailings from the amalgamating-plate are concentrated. The ore is trammed from the mine-workings to the mill, 500 feet, on a covered-in surface tramway. The ore goes through grizzlies, the undersize going directly to the 150-ton ore-bin, and the oversize to the crusher which crushes to about ½-inch size, and then to the same ore-bin. From the ore-bin an automatic feeder discharges the ore into the Gibson grinder, where it is ground to about 20-mesh size.

The Gibson grinder consists, in effect, of a large pestle and mortar, the pestle being given a grinding motion by the swinging of the top of it through a circle about 2 feet in diameter, while pressure of the pestle on the mortar is given by its own weight together with the downward pull of a heavy spring. The rated capacity of the Gibson grinder is 30 tons in twenty-four hours. Mercury for amalgamating the free gold in the ore is put into the grinder and most of the amalgam is caught on baffles in the machine, the remainder being caught on the amalgamating-plate, over which the pulp from the grinder discharges. From the amalgamating-plate the pulp feeds directly to a Wilfley table, where the bornite content of the pulp is taken off as a concentrate and the tailings go to waste. No figures are available to show what extraction the mill as a whole makes.

There are on this property several quartz veins which are mineralized in places with bornite, chalcocite, copper carbonates, and varying amounts of free gold. The first development of the main vein on the property was an incline shaft 72 feet deep. After this a crosscut tunnel was driven to strike this main vein at a point some distance south-west of the shaft. This tunnel was driven a total distance of 412 feet and crosscuts the main vein at a point 360 feet in from the portal. The vein was then drifted on 90 feet to the west and 70 feet to the east. From the

east drift a 50-foot crosscut has been run into the hanging-wall and from the west drift a crosscut 17 feet in length.

At a point 125 feet from the portal of the crosscut tunnel a blind vein was encountered which showed from 2 to 3 feet of quartz well mineralized with bornite. This vein was drifted on westerly for a distance of 22 feet, and at this point a winze was put down 14 feet in depth. From the bottom of the winze a drift to the west has been driven for 70 feet. The workings on this blind vein show irregular mineralization of the quartz, with, in places, bands of good ore in which specks of free gold are quite frequently seen.

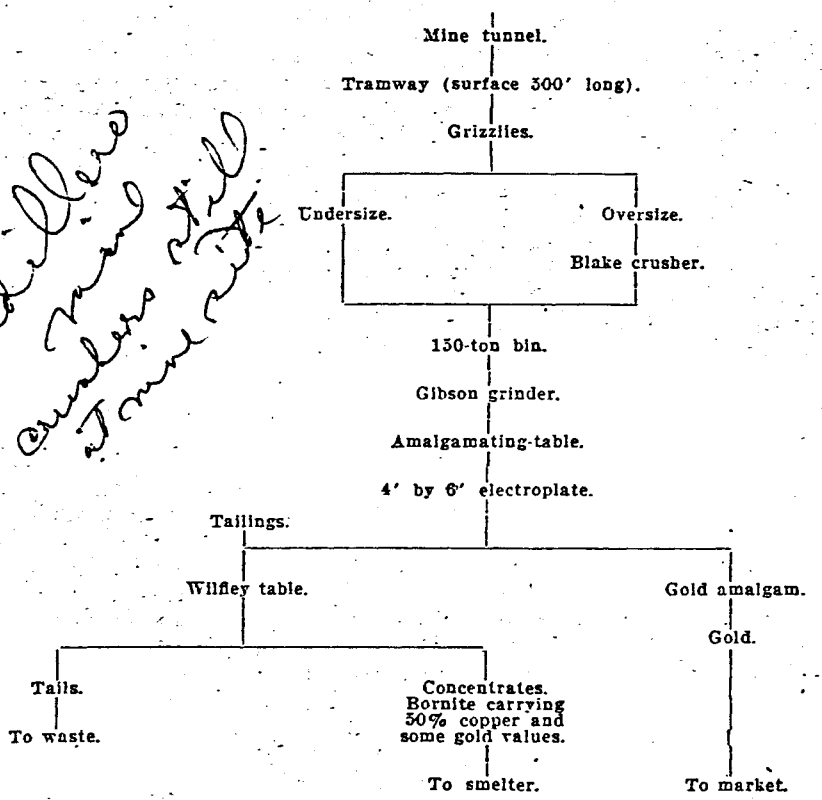
During the summer a short crosscut tunnel was driven to cut the main vein 110 feet to the north-east of the shaft. This tunnel is 40 feet long and shows the vein to have a width of about 4 feet, together with some parallel stringers in the walls. This tunnel-level is 36 feet below the bottom of the shaft on the dip of the vein.

Development of the mine was carried on during the summer with a force of from six to eight men under the superintendency of A. Thompson. Work was stopped in the fall, but will be resumed early in the spring. The ore apparently occurs in shoots with barren places between, so that considerable development will be required before much tonnage is blocked out.

The mill is housed in a good building, and there are, as well, a tool-house, blacksmith-shop, and concentrate-bin, and a fan-house at the mouth of the main tunnel. A covered tramway runs from this tunnel to the top of the mill building.

Accompanying this report is a diagramatic flow-sheet of the mill.

Kitsalas Mountain Copper Co. Flow-sheet of Mill.



Kleanza Co. This company continued the work started last year of developing the *Golden Crown* group, which property is held under option. A number of claims contiguous to the *Golden Crown* group and extending to the top of Kleanza mountain have been located by the company. These are known as the *Valhalla* and *Kleanza* groups. On this part of Kleanza mountain covered by these various groups of claims there are

1937 Grotto 2 miles west of Fatman

Ruby & Margie claims 2 post mineral claim

At the portal a dump of vein-matter having a volume of 135 cubic feet, equivalent to 11¼ tons, has been accumulated. The owner reports that this is about half of what was originally accumulated, the rest having been lost by high water in the creek. A representative sample of this dump assayed: Gold, 0.20 oz. per ton; silver, 12 oz. per ton; copper, 1 per cent.

At 590 feet elevation, about 300 feet south 63 degrees west from the adit and on the opposite or southerly side of the creek, a quartz vein outcrops in altered andesite on the edge of the creek. It strikes north 48 degrees east, dips 70 degrees north-westerly, and can be traced for about 20 feet on the bluff-face bordering the creek to about 10 feet above the present water-level. Further possible continuity up the hill is obscured by thick timber and heavy overburden. It varies from 6 to 12 inches in width, with free walls, and is well mineralized with massive aggregates of pyrite and chalcopyrite associated with some specularite. In the bluff-face at elevation 600 feet and 20 feet from the creek, an adit is driven along a bearing of south 45 degrees west into the 38-degree hill-slope and angling slightly across the vein for a distance of 21 feet. For 14 feet of this distance the vein-width varies from 12 inches at the portal to 2 inches at 7 feet from the face. For the last 7 feet to the face it pinches and disperses in a disturbed area and at the face is cut off by a well-defined fault, striking north 45 degrees west and dipping 75 degrees south-westerly. A sample of selected mineralization from the 14-foot length in the adit and the surface exposure on the bank of the creek taken from vein-widths varying from 2 to 12 inches assayed: Gold, 0.80 oz. per ton; silver, 24 oz. per ton; copper, 3.3 per cent.

On the northerly side of the creek-bed, at 605 feet elevation and about 100 feet north 15 degrees west from the last-described adit, a series of tightly-frozen lenticular and discontinuous reticulated quartz stringers and patches from ½ to 12 inches wide occur in granitically-hybridized andesite. These are distributed across a width of about 10 feet and a length of about 40 feet and strike north 72 degrees east. They are very irregularly mineralized with widely-separated massive patches and blebs of chalcopyrite from ½ to 8 inches in diameter.

At 615 feet elevation on the southerly side of the creek-bed and about 300 feet westerly from this showing a similar one occurs. In this, however, the quartz stringers strike north 80 degrees west. A composite sample of selected chalcopyrite from these two showings assayed: Gold, 1.94 oz. per ton; silver, 13 oz. per ton; copper, 18.4 per cent.

At 1,010 feet elevation on the southerly side of the creek, and about 700 feet south 25 degrees east from the cabin, an open-cut 10 feet long through overburden on the 36-degree hill-slope discloses disseminated chalcopyrite in a highly silicified, cherty rock. The rock is appreciably shattered and characterized by major jointing striking north 40 degrees west and dipping 42 degrees north-easterly, with minor jointing striking north 80 degrees east and dipping 50 to 70 degrees north-westerly. Chalcopyrite in fine dissemination, accompanied by some pyrite, is fairly evenly distributed through the cherty rock. The occurrence has not been traced and no definite walls are exposed, so that its attitude cannot be determined. A representative chip sample of the open-cut over a length of 10 feet and a width of 5 feet assayed: Gold, trace; silver, 0.4 oz. per ton; copper, 0.4 per cent.

Refer to Annual Reports, Minister of Mines, British Columbia, 1916 under "Diamond," 1929 and 1931 under "Diorite" and "Grotto"; "Lode-Gold Deposits of British Columbia," Bulletin No. 1, 1932, under "Grotto"; Geological Survey, Canada, Memoir 212, 1937, under "Grotto" and "Diorite."

GOLD-COPPER DEPOSITS.

Usk Area.* on the yellowhead Pearl

Lucky Luke. This group consists of four claims owned by G. L. Moody and Chas. Kelly, of Usk. The property is distant about 1¾ miles from Usk, and is reached by a pack-trail half a mile in length branching from the Usk–Vanarsdol Wagon-road at a point about 1¼ miles from Usk. The property is on the heavily-timbered, lower eastern slopes of Kitsalas Mountain, which rise at about 20 degrees, increasing in steepness toward the summit. On the lower slopes glacial debris and dense vegetation obscure the formation at most points, but occasional bluff-like outcrops become more numerous

* By Douglas Lay and J. T. Mandy.

The lower adit intersects the shear-zone at 120 feet, then follows it north-west for a distance of 130 feet to a fault striking north 35 degrees east and dipping 70 degrees south-east. The vein following the shear-zone is cut off by the fault, which has been followed for 35 feet south-west. The main working has been driven ahead on the strike through the fault, but the dislocated part of the vein has not yet been found. Striations on the fault-plane are horizontal and are not deeply grooved. In view of the fact that the quartz in the face of the upper adit evinces drag to the south, and a similar appearance is exhibited by the vein immediately south-east of the fault on the lower level, available evidence points to displacement of the vein to the south. The quartz vein reaches a maximum width of 27 inches near the bottom of the raise to the upper adit, and for a length along the strike of about 30 feet in this region mineralization is heavy. North-west of this point the vein-fracturing weakens, and also the mineralization within it. The raise shows continuous well-mineralized quartz for practically its entire height and a sill-floor stope has been carried out over a length of 30 feet immediately above the lower adit, where bands of solid bornite and chalcocite several inches in width are exposed. This raise is situated about 35 feet north-west of the point at which the shear-zone was first penetrated by this adit. An aplitic dyke penetrates the shear-zone in the central part of the raise and for some distance forms the hanging-wall of the shear-zone. At some points the dyke is itself slightly fractured and mineralized similarly to the quartz vein. The 25-ton shipment of hand-sorted ore previously mentioned came from the stope. Also recovered from this adit are:—

(*a.*) Twenty-four sacks of closely-sorted ore the estimated weight of which is about 1,900 lb. A grab sample of this assayed: Gold, 11.1 oz. per ton; silver, 21 oz. per ton; copper, 34.8 per cent.

(*b.*) A dump estimated to contain 16.6 tons, from which a sample assayed: Gold, 0.64 oz. per ton; silver, 3 oz. per ton; copper, 2.8 per cent.

A few feet east of the aforementioned raise a winze was sunk in 1934 to a depth of 80 feet on the dip of the shear-zone. This is now filled with water, but was examined in 1934. Ore was continuous to a depth of 40 feet, then pinched, but subsequently improved. At the bottom, on the north-west of the winze, a width of 2½ feet of well-mineralized quartz showing bornite and chalcocite and free gold at some points was exposed in 1934. Subsequent to examination in that year it is understood that a drift was continued 15 feet north-west of the winze, disclosing continnation of the sulphide mineralization. From this winze is a dump of vein-matter of approximately 21 tons. A sample of this assayed: Gold, 0.04 oz. per ton; silver, 2 oz. per ton; copper, 3.1 per cent. The 10 tons milled in 1936 also came from the winze, according to report.

The underground workings to date disclose one possibly profitable mineralized section in the form of a steeply-plunging or vertical lens in the vicinity of the winze and raise between the adits. The extent along the strike is not more than about 30 feet, but the major axis extends from the top of the raise to the bottom of the winze and possibly beyond these limits in both directions.

Having regard to the fact that the vein where dislocated by the fault is weak, it would not seem likely that the dislocated portion even if recovered will prove materially different. It would, therefore, seem advisable to endeavour to trace the vein along its strike in a south-easterly direction from the underground workings.

Refer to Annual Reports, Minister of Mines, British Columbia, 1918, 1919, 1923, 1924, 1925, 1928, and 1934; and to Geological Survey, Canada, Memoir 205, 1937.

Nugget Group. This group, consisting of five claims owned by P. Brusk, of Vanarsdol, is situated on the south slope of Kitsalas Mountain on the north side of Hankin (Phillips) Creek. The base-camp is situated on the Usk–Vanarsdol Wagon-road, immediately adjacent to the left bank of Hankin (Phillips) Creek, and is distant 2½ miles from Vanarsdol and 4½ miles from Usk. An excellent pack-trail 1¾ miles in length follows the left bank of Hankin (Phillips) Creek on an easy grade, not much exceeding 8 per cent., for a distance of about 1 mile, and then, leaving the creek, switchbacks up the steep, densely-timbered mountain-slope to the property. Grades on the latter part of the trail are steep, but not unduly so. The mountain-slope in the vicinity of the showing examined, at elevation 1,850 feet, approaches an angle of 30 degrees and is densely timbered.

A rough compass survey showed that the adit, beyond a point about 60 feet in from the portal, was not being driven in a course conformable with the line of strike of the vein. From this point the course is slightly changed, so that the roof of the adit is placed so much below the original ore-body as to conceal it completely and make it appear as though cut off. The fissure followed from that point appears to have no connection with the main fissure which outcrops at the surface. The supply of both timber and water for all purposes is plentiful.

KITSALAS MOUNTAIN.

So far as at present reported, no mineral claims have been staked on the west side of the Skeena river south from Knauss mountain, situated a few miles south from Fiddler creek, until Lowrie creek, near the northern spur of Kitsalas mountain, is reached, some seventeen miles south from Fiddler creek.

Poor Boy Group.

This group of mineral claims consists of the *Triune, Gold Standard, Ella, and Poor Boy* claims, owned by L. A. Moody, Richard Lowrie, James Gall, and James Darby, of Usk, and is situated in the foot-hills of the northern spur of Kitsalas mountain. On the *Triune* claim an open-cut has been made in a sheared zone in diorite country-rock at an elevation of 500 feet. In this occasionally could be noticed kidneys of quartz containing particles of visible free gold, also quartz containing a little bornite and stained with copper carbonates, but no evidences of the existence of an ore-body of commercial value could be found.

On the *Gold Standard* claim, adjoining the *Triune* on the east, an open-cut in a sheared zone in diorite country-rock 15 feet long, with the face of the cut 12 feet deep, was examined; this was made into the side of the mountain at an elevation of about 800 feet, and showed a vein 18 inches wide filled with quartz, striking east and west and dipping to the north, a sample from which assayed: Gold, 0.06 oz.; silver, 1.6 oz.; copper, 0.3 per cent.

Another open-cut, also in a sheared zone in diorite, about 200 feet west from the one just referred to, showed a vein filled with quartz; this vein was 30 inches wide on the surface, but only a few inches wide in the floor of the cut 8 feet below. Judging from all the surrounding conditions, it is considered doubtful if any commercial value could be attached to the discoveries so far made on this group of claims, but further prospecting may reveal better showings.

Cordillera Group.

This group of mineral claims includes the *Queen Ann, Cordillera, Yellow Pearl, Gold Dust, Camille,* and *Gold Sentinel,* owned by James Darby, of Usk, and J. D. Wells, of Kitsalas. The property was staked during the spring of 1914, when the finding of rich float led to its discovery; it is situated about two miles and a half southerly from Usk Station, on the east slope of Kitsalas mountain. At an elevation of 700 feet a fissure-vein outcrops in a diorite country-rock. This had been exposed by a series of open-cuts for a distance of about 500 feet along its line of strike towards S. 30° W., with the dip apparently nearly vertical. The width of vein-filling varies from 1 to 8 feet, but whether the outcroppings are those of a continuous vein or of separate lenses along a general line of strike had not been determined.

The minerals in this vein are chiefly chalcocite and bornite in a quartz gangue, in which can be seen many particles of free gold, visible to the naked eye. The most northerly exposure of mineral is in fairly heavy timber on the *Queen Ann* mineral claim, close to the dividing line between that claim and the *Cordillera*, which adjoins it to the south-west. At this point an open-cut 27 feet long by about 8 feet wide has been made. The No. 2 open-cut is 25 feet distant towards S. 30° W.; this is 10 feet long by about 8 feet wide. The No. 3 open-cut is 75 feet distant in the same direction, which is also 10 feet long by about 8 feet wide. The No. 4

open-cut is 200 feet distant in the same direction; this is 15 feet long by about 8 feet wide. No. 5 open-cut is 25 feet distant in the same direction; this is 21 feet long by about 10 feet wide. No. 6 open-cut is 100 feet distant in the same direction; this is 21 feet long by 10 feet wide. The elevation between the No. 1 and No. 6 open-cuts rises gradually, the difference between the two points being about 100 feet.

The following list of assays shows the values carried by the samples taken:—

Location sampled.	Assay Values.		
	Gold.	Silver.	Copper.
	Oz.	Oz.	Per Cent.
Selected sample from No. 1 open-cut	0.38	9.3	23.4
Average sample across 3 feet from No. 3 open-cut	0.4	3.8	7.1
Shipping-ore from No. 2 open-cut, representing about 10 per cent. of vein-matter	0.7	8.9	10.6
Shipping-ore from No. 1 open-cut, representing about 5 per cent. of vein-matter	0.36	9.5	21.1

In addition to the outcroppings and work referred to, other mineralized outcroppings had been discovered on the mountain at a considerably greater elevation, which indicated a series of veins lying nearly parallel to the line of open-cuts, but no work had been done. From all the indications this group of mineral claims is very promising, and it should be systematically prospected.

Old Timer Group.

This group consists of the *Old Timer*, *Fannie*, *Walker*, and *Digby* mineral claims, owned by C. W. D. Clifford, J. W. Patterson, and J. D. Wells, of Kitsalas. It is situated on the south-eastern slope of Kitsalas mountain about one mile west from the Canyon, and is reached by a foot-trail which branches off from the wagon-road connecting the old village at the Canyon with Phillips creek.

At an elevation of about 1,800 feet an open-cut has been made across an igneous dyke on the *Walker* claim. This cut is 24 feet long by about 8 feet wide and 12 feet high at the face.

This dyke is very much fractured; there is considerable epidote and some chalcopyrite in a quartz gangue filling the fissures, which strike nearly north and dip vertically. These fissures are narrow, the widest being 2 feet; an average sample taken near the face of the open-cut, assayed: Gold, 0.03 oz.; silver, 0.8 oz.; copper, 3.4 per cent. The surface is so heavily covered with underbrush as to conceal all traces of any possible extension of the fissure along the strike.

Copper King Group.

This group consists of the *Poor Mine*, *Copper King*, *North Star*, and *Big Copper* mineral claims, owned by Peter Brusk and associates. The property is situated on the south slope of Kitsalas mountain near the head of Phillips creek, on the north side, and about five miles west from Kitsalas canyon. It is reached by an excellent trail up Phillips creek, which branches off from the wagon-road from the Canyon at Brusk's ranch.

At an elevation of about 1,900 feet, on the *Copper King* claim, in the bed of a branch of Phillips creek, there is a strong outcropping of quartz carrying bornite, chalcopyrite, and iron pyrites. In an open-cut made in the south-east bank of the branch creek, the walls on each side of this outcropping are so well defined as to indicate a clean-cut fissure in an igneous rock. The line of strike is 75° E. and the angle of dip is 60 degrees towards the south-east.

USK*

Copper

Nicholson Creek Mining Corporation (54° 128° N.E.) Mine office, Usk. W. D. Galbraith, manager. This property is 2 miles by road from Usk. In 1952, 750 feet of underground diamond drilling, 28 feet of drifting, and some open-cutting and trenching were done. One ton of ore was shipped for mill testing. Mr. Galbraith reports that drifting and raising are planned for 1953.

[Reference: *Geol. Surv., Canada,* Mem. 205, 1937, pp. 53–55.]

Copper-Silver-Lead-Zinc-Gold

Grotto (Tungsten of British Columbia Ltd.) (54° 128° N.E.) Company office, 717 West Pender Street, Vancouver. J. Bell, manager. Access to the property from the railway at Pitman is by 2 miles of tractor-road along the north side of Hardscrabble Creek. This property, formerly known as the Diamond and later as the Diorite group, has not been worked for some time. Starting in September, 1952, the road was built to the property and a small camp was built. Underground work consisted of rehabilitation of No. 1 and No. 2 adits, and some drifting and stoping were done in No. 2 adit. The ore from No. 2 adit was sacked for shipment. The average number of men employed was eight.

[Reference: *Minister of Mines, B.C.,* Ann. Rept., 1937, pp. C 4–C 7.]

DORREEN*

Gold-Copper-Lead-Zinc

Fiddler (Dorreen Mines Limited) (54° 128° N.E.) Company office, 525 Seymour Street, Vancouver. Alex Mackenzie, president; J. D. Boulding, manager. Capital: 3,000,000 shares, 50 cents par value. The mine camp is on Knauss Creek, about 5 miles west of Dorreen by road. The mine operated during 1952 until it was closed for the winter on October 15th. During that time about thirteen men were employed. Considerable difficulty was encountered during the winter in efforts to keep open the one-half mile of road between the camp and the mine. Snowslides were a hazard to the road and to the 12-inch pipe-line that supplies water to drive the numerous Pelton wheels in the mill.

In 1952, 252 feet of drifting, 113 feet of crosscutting, 166 feet of raising, and 1,400 feet of diamond drilling were done. A vein recently discovered above the top entry to the mine was followed for 48 feet by a drift at 2,466 feet elevation.

During operation of the mill from May 23rd to August 28th, 525 tons of ore was milled. Approximately 20 tons of bulk concentrate shipped to the Trail smelter assayed: Gold, 5.25 oz. per ton; silver, 13.05 oz. per ton; lead, 17.3 per cent; zinc, 7.4 per cent; copper, 2.6 per cent.

HAZELTON†

Silver-Lead-Zinc-Gold-Cadmium

Silver Standard Mines Limited (55° 127° S.W.) Company office, 602 West Hastings Street, Vancouver. William Dunn, superintendent. Capital: 3,500,000 shares, 50 cents par value. The vertical shaft is now 510 feet below the 1300 level. From the shaft, No. 4 and No. 6 veins were reached by crosscuts on the 1150 and 1000 levels. Drifting was done on both veins on these two levels, and vein continuity with depth was established.

On the surface No. 12 vein was exposed by stripping for 120 feet. Values in a length of 78 feet are reported by the company to be good. An attempt to strip No. 6 vein proved

* By J. W. Patterson.
† By J. W. Patterson, except as noted.

OMINECA MINING DIVISION.

Usk Area.

*Grotto Group.**—This group comprises the following claims, held by location by T. Bell, Lee Bethurem, George Alger, and L. Brash, of Usk: *Gwen, Gwen No. 1, Poes, Grotto, Grotto No. 2, Senaca, Coselite, Gap Eagle, Talus, Monsoon, Canyon,* and *Minerva.* It is referred to in the Annual Reports of the Minister of Mines for 1916, 1929, 1931, 1937, Bulletin No. 1, 1932, and Department of Mines and Resources Paper 36–20, 1936, and Memoir 212, 1937.

The property is in the valley of Hardscrabble Creek, about 2 miles south-westward from Pitman Station on the Canadian National Railway.

The main showings along the creek consist of quartz veins ranging from a few inches to 3½ feet wide, striking north-eastward and dipping north-westward. They are mineralized with pyrite, chalcopyrite, specularite, sparse sphalerite, and small amounts of petzite (silver-gold telluride), hessite (silver telluride), and cosalite (lead-bismuth sulphide).

A report by the Department of Mines, Ore Dressing and Metallurgical Laboratories, Ottawa, on a small test-shipment indicates that "75 per cent. of the gold, 74 per cent. of the silver and 96 per cent. of the copper can be recovered in a rougher flotation concentrate. On cleaning a shipping product was made assaying 3.5 oz. gold per ton, 125 oz. silver per ton, and 25 per cent. copper.

"Agitation of the reground flotation tailing in cyanide solution gave an over-all recovery of 96 per cent. of the gold, 96 per cent. of the silver, and 96 per cent. of the copper."

At 575 feet elevation and about 150 feet south-eastward from the cabin, No. 1 adit has been driven on a vein striking north 52 degrees east and dipping 40 degrees north-westward. For 22 feet the vein is well mineralized across widths of 1 foot to 3.8 feet. During 1938 the vein was stoped to the surface along this 22-foot stretch and the cobbed product shipped to the sampling plant at Prince Rupert.

No. 2 adit is at an elevation of 590 feet, on the southerly side of the creek and about 300 feet along a bearing of south 63 degrees from No. 1 adit. It extends 21 feet along a vein striking north 48 degrees east and dipping 70 degrees north-westward. In 1938 the No. 2 vein was mined from creek-level, 582 feet, below No. 2 adit, to a point (July 15th) 9 feet from and 8 feet below the face of No. 2 adit. A sample of the vein in the face across 12 to 24 inches assayed: Gold, 0.58 oz. per ton; silver, 12.2 oz. per ton; copper, 3.4 per cent.; lead, *nil;* zinc, trace.

Test bulk-samples and tonnage lots were shipped to the sampling plate at Prince Rupert from Nos. 1 and 2 adits. Details of them are given in the sampling plant report under *Grotto* group.

New workings since the 1937 Annual Report of the Minister of Mines are on No. 3 vein, which outcrops in the face of the bluff bordering the edge of the creek at 585 feet elevation and 74.8 feet north 86 degrees east from No. 2 adit-portal. At this point an open-cut and short adit is driven on a bearing of south 54 degrees west, and an acute angle across a fault which strikes south 66 degrees west and dips 40 degrees north-westward. The vein strikes south 54 degrees west in alignment with the adit and dips 70 degrees north-westward. On the foot-wall side of the fault the vein is offset about 18 inches, is 10 inches in width and moderately mineralized with pyrite, chalcopyrite, and some sphalerite. A sample of vein, 10 inches in width in the face, assayed: Gold, 0.06 oz. per ton; silver, 2.3 oz. per ton; copper, 0.1 per cent.; lead, *nil;* zinc, trace.

No. 4 vein outcrops in the face of the bluff bordering the creek at 595 feet elevation and 26 feet north 55 degrees west from No. 2 adit-portal. At this point an open-cut and adit 15 feet in length, about 5 feet above the creek and bearing south 44 degrees west, exposes the vein 12 inches in width, striking south 44 degrees west and dipping 70 degrees north-westward. The vein is moderately mineralized with pyrite and is on the foot-wall side of a fault which strikes south 54 degrees west at an acute angle across the adit and dips 30 degrees north-westward.

On the *Poes* claim, between 1,300 and 1,465 feet elevation and 1,800 to 2,100 feet south-westward from No. 2 adit, some strippings and open-cuts expose three north-eastward-striking veins. However, most of the work has been concentrated on No. 1 and No. 2 veins and these latter ones have been but partly explored.

* By J. T. Mandy.

at higher points. The camp buildings and underground workings are situated between elevations of approximately 1,000 and 1,100 feet, the former being about 700 feet above the Canadian National Railway.

A lenticular quartz vein varying in width from a few inches up to 2½ feet occupies in part a shear-zone from 3 to 8 feet wide, strike north 70 degrees west, dip 65 degrees north-easterly, in andesite intruded at some points by aplitic dykes or tongues. The latter antedate the mineralization, but are probably closely contemporaneous with the formation of the shear-zone. Mineralization observed in the quartz vein consists of bornite, chalcocite, lesser amounts of pyrite, and some specularite and magnetite. Malachite-staining is widespread. Free gold occurs frequently in association with chalcocite. Mineralization is bunchy, and post-mineral movement is much in evidence, leaving the vein-walls free and facilitating selective mining and sorting underground.

After discovery by the original owners, L. E. Moody and R. Lowrie, in 1917, the property was operated by them until 1923, when an option was secured by S. A. D. Davis, and 25 tons of hand-sorted ore was shipped that year which contained 18 oz. gold, 316 oz. silver, and 11,162 lb. copper. Thereafter no material amount of work was carried out until 1934, when R. W. Seelye optioned the property. Underground development consisted in sinking a winze from the lower adit. A small mill of nominal capacity of 20 tons daily was erected close to the railway, and a power-operated 1-bucket aerial tram constructed for conveying ore from the lower adit to the mill. The milling plant consists of a 9- by 8-inch jaw-crusher, 3- by 2½-foot Herman ball-mill, inclined corduroy table, and Wilfley table. Power was supplied by a Fordson tractor. In 1936 about 10 tons was treated, yielding between 800 and 1,000 lb. of concentrates, according to W. R. Adams, in charge of operations at that time. A grab sample of these concentrates, contained in a small bin outside the plant, assayed: Gold, 0.90 oz. per ton; silver, 16 oz. per ton; copper, 27.9 per cent. Owing to litigation between optionor and optionee, operations were suspended in 1936. In the spring of 1937 prospecting on the surface was resumed by G. L. Moody and L. E. Moody.

The shear-zone is exposed by open-cutting and trenching for 75 feet along its strike above the upper adit between elevations of 1,130 and 1,175 feet. The quartz vein, varying in width from 2¼ feet at the south-east end of the open-cutting to 2 inches, is continuous in intermittent outcrops for this distance. A face 10 feet high, average width 2.1 feet, was sampled at the south-east end of the exposure. This sample assayed: Gold, 0.16 oz. per ton; silver, 0.3 oz. per ton; copper, 0.7 per cent. Several long trenches across the strike have been made north-west of the exposure described, without apparently affording proof of the continuity of the vein in this region, in which it is evident from the underground working that faulting has taken place. Open-cutting this year was carried out north of and also below the portal of the lower adit, disclosing pyritization and a certain amount of cupriferous mineralization in the andesite formation. Small quartz veinlets were also uncovered. Surface prospecting on the projected strike of the vein below the lower adit would appear to be well advised, as the existence of faulting in this region is not known so far, and there is much to suggest that the vein may prove stronger in this region than at points north-west. Moreover, any discoveries will be more adjacent to transportation, and there is also the possibility of uncovering a parallel vein or veins.

Two adits, commencing as crosscuts at elevations of 1,110 and 1,045 feet respectively, follow the shear-zone for respective distances of 96 and 130 feet. These adits are connected by a raise, and in the near vicinity of the bottom of the latter a winze has been sunk from the lower adit to a depth of 80 feet.

The upper adit intersects the shear-zone 20 feet from the portal, and then follows a quartz-band averaging a few inches in width more or less continuous to the face. The latter shows evidence of incipient faulting, with a drag of the quartz to the south. Mineralization save for malachite-staining is somewhat sparse, except in the vicinity of the top of the raise from the lower adit, where a width of 16 inches of well-mineralized quartz is exposed. In this region also, another small band of quartz 4 inches in width occurs on the hanging-wall side of a narrow aplitic dyke, which here forms the hanging-wall of the shear-zone for some distance. The vein material, about 13.6 tons, recovered in the course of driving this adit is piled at the portal. A representative sample assayed: Gold, 0.36 oz. per ton; silver, 0.7 oz. per ton; copper, 1 per cent.

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CORPORATION FALCONBRIDGE COPPER

6415 - 64th Street, Delta, B.C., Canada V4K 4E2

Tel. (604) 946-5451

October 12, 1983

Mr. T. Barkley
Box 1513
Parksville, B. C.
VOR 2SO

Dear Mr. Barkley:

I return to you herein the original data on the Jensen properties at Usk that you sent to me in your letter of October 4. The area and data on the claims is clearly of interest. However, our priorities are such that we cannot assume commitments in this area at the present time. We expect to have a field crew in Terrace next season and will contact you at that time. Thank-you very much for contacting Falconbridge Copper.

Sincerely,

D. Watkins

Exploration Manager
Western Canada

xc: AJD