

VOLLAUG GROUP (HURRICANE) REPORT BY C. CLEVELAND
1946

SUMMARY & CONCLUSIONS

The Vollaug vein is a massive to partially ribboned quartz vein outcropping on the top of Table Mountain in the McDame Creek area, of the Stikine Mining Division. The vein strikes approximately eastwest and dips thirty to thirty-seven degrees north and is displaced in several places by cross faults striking north to northeast. For the most part the vein is underlain by greenstones and tuffaceous rocks and is overlain by argillites. Structural interpretation of the vein is difficult. The vein may occupy a strong thrust fault in which case the overlying argillites are older than the underlying greenstones. On the other hand the vein may be of the saddle reef type occupying the contact between a series of greenstones and sedimentary rocks in normal sequence.

The Vollaug vein has been trenched intermittently for a strike length of over 5,000 feet. In addition a number of shallow diamond drill holes have been drilled.

The above exploration work has outlined two ore shoots aggregating 1,650 feet in length averaging 4.7 feet wide and assaying \$24.00 per ton in gold uncut and \$14.00 per ton cut.

The Vollaug vein contains appreciable free gold. This fact is reflected in the range between cut and uncut assay values. Therefore it is quite possible that underground work might indicate a grade appreciably higher than \$14.00 per ton.

In the light of present economic conditions and the high cost of transportation into the McDame Creek Area, the Vollaug cannot be considered an attractive property. However, in the event that the McDame Creek Area should be opened by a road, underground work on the Vollaug vein would be justified.

In the opinion of the undersigned the Vollaug is a good holding property if very cheap terms can be obtained.

PROPERTY & OWNERSHIP

The following claims are held under option

from the Vollaug estate by Mr. Bob Wilms, of McDame Creek -

Hurricane No. 1	Hurricane No. 3
" 2	" 4

In addition, Mr. Wilms has control of ten other claims adjoining the above and staked this Spring -

Steep	Goat	Drop Off
White	Kate	Black
Grey	Cat	Blue
Sheep		

These latter claims cover the dip of the vein on the north side of Table Mountain.

LOCATION & TRANSPORTATION

The Vollaug property is on Table Mountain about 2 miles south and east of McDame in the Stikine Mining Division. The claims lie in an eastwest direction at an elevation of 5,500 feet on the plateau-lie top of the mountain. The Vollaug is some 32 miles by road and trail from McDame Post on the Dease River and 65 miles by air from Watson Lake and 200 miles by air from Carcross.

Present ways of travel to the property are by river boat from Lower Post, or Telegraph Creek and Dease Lake to McDame Post, thence by pack horse to Table Mountain. Charter trips by plane can be made from Carcross to McDame Lake but are expensive. The charter trip from Carcross to McDame Lake costs \$425.00 or 20¢ to 25¢ per pound. With enough traffic the freight rate by air from Watson Lake would be about 10¢ to 12¢ per pound.

The only economical method of transportation is by road. It is reported that the Provincial Government is making a reconnaissance this Fall for a road from McDame Creek to a point on the Alaska Highway where it crosses the Liard River some 20 miles north of Lower Post. This road will cross Blue River and French Creeks on the way to McDame Creek and either come into McDame Creek Valley via Third North Fork or the Pass, then run westward to McDame Lake. The length of the road would be about 90 miles. Probable cost is estimated at \$100,000.00. The projected route is reported as good road building country with a great deal of gravel and with jack-pine flats.

Assuming a road to McDame Creek was in, freight would be trucked either from Haines or Whitehorse over the

Alaska Highway. Trucking from Haines is reported cheaper than by taking the freight by rail-haul to Whitehorse.

The estimated freight rate from Vancouver to Whitehorse via Skagway is $3\frac{1}{2}\%$ per pound and from Whitehorse by truck to McDame Creek would be about 3¢ to 4¢ per pound. This gives a total freight rate of about 7¢ per pound. The truck haul from Haines is limited to 5 or 6 months of the year.

The freight rate from Vancouver by way of Telegraph Creek, Dease Lake and Dease River is about 12¢ per pound.

Providing a road is built to the McDame Creek Area from the Alaska Highway, the cheapest transportation costs for a mining operation would be by way of coastal steamer to Haines or Skagway, Alaska, followed by a truck haul to McDame Creek. This freight cost is estimated at about 7¢ per pound.

HISTORY

The Vollaug vein was discovered by John Vollaug in 1935. Vollaug died a few years ago and his mining interest is now under the administration of the Gold Commissioner for British Columbia.

Consolidated Mining and Smelting Company of Canada trenched the Vollaug vein in 1937 and did considerable diamond drilling. They relinquished their option on the property in the fall of that year. Subsequently, Bob Wilms of McDame Creek has held the key claims under his control.

GEOLOGY

The Vollaug property lies in an area of greenstones and sedimentary rocks flanking the east side of the Cassiar Batholith. These greenstones and sediments have been warped into a northwest trending syncline. Regional stresses probably resulting from the invasion of the Cassiar batholith into the overlying sediments and greenstones has not only folded these rocks but faulted and fractured them. Subsequent to this faulting and fracturing of the greenstones and sedimentary rocks a period of mineralization gave rise to quartz veins carrying some sulphide minerals and some gold.

Interpretation of the structure of the Vollaug vein is difficult. This is chiefly because the relative ages of rocks underlying and overlying the Vollaug vein fissure are not absolutely certain. One interpretation is that the

sedimentary rocks (Dease series?) overlying the Vollaug vein fissure are older than the rocks underlying the vein fissure. In this case the Vollaug vein occupies a strong thrust fault older rocks being thrust over the top of younger rocks. Such a structure suggests strength and perhaps great continuity to the Vollaug vein. The other interpretation is based on reasoning that the sedimentary rocks overlying the Vollaug vein fissure are younger than those beneath, there is therefore no overthrusting and the Vollaug vein is a saddle reef occupying the contact between an older and younger series of rocks. If the saddle reef origin be true for the Vollaug vein, the vein might change to steeper dips at depth. It is quite possible that diamond drilling has not fully tested this condition. On the other hand some rock outcrops near the crest of Table Mountain show steeply dipping and slightly overturned argillite beds suggesting thrust faulting. Even if this structural condition resulted in a vein of more constant dip occupying the plane of the thrust fault, block faulting caused by northsouth cross faults might cause diamond drill holes to miss their objective unless considerable drilling was done down the dip of the vein.

The Vollaug vein strikes approximately eastwest and dips about 31 to 35 degrees north. In a few places the vein dips more steeply but for no appreciable distance. The immediate footwall of the vein is carbonated greenstone, probably a tuff. This tuff is succeeded further into the footwall by agglomerates and other types of greenstones. Some of the greenstones are altered to talcose rock. The hanging wall of the vein is composed of black argillite with a few intercalated arenaceous beds.

Mineralization in the Vollaug vein is massive and ribboned quartz with small amounts of sulphide minerals and free gold. The sulphide minerals are pyrite, chalcopyrite, grey copper, and galena. The ribbon structure in the quartz consists of argillaceous or graphitic partings sometimes painted with gold. For the most part the quartz ribboning appears to occupy the footwall side of the vein for about one third the vein width. The massive quartz lacks sulphides and gold values are almost entirely in the ribboned quartz.

For the most part the vein is structurally strong and well defined, but like most quartz veins occupying

fault fissures, pinches and swells. A normal section of the vein shows a width of about 4.5 feet but in some places it pinches to about one foot. The east end of the vein is narrow.

Post mineral faulting striking in a general north direction has displaced the vein both horizontally and vertically. Horizontal displacements range from 100 feet or more to twenty or thirty feet and less. Vertical displacements are not known because the writer has not had access to the diamond drill records, but they are reported to be a considerable amount. The west end of the vein is terminated by a strong north-south fault with almost vertical striations. The presence of greenstone north and west of this fault together with the vertical movement on this fault suggest normal faulting with the resultant uplifting of the vein to the west of the fault and subsequent stripping by erosion.

ORE

The Vollaug vein was not sampled, because the results of Consolidated Mining and Smelting Company of Canada samples were available and the results of Dr. Mandy's samples. These sample results are shown on the enclosed map. The following data regarding assays, widths and lengths of ore are computed from this map.

<u>Block A</u>		<u>Block B</u>	
Length	450'	Length	1,200'
Width	4.7'	Width	4.65'
Assay	.72 oz. Au per ton .49 oz. Au per ton cut	Assay	.68 oz. .34 oz. cut
Four diamond drill holes indicate a vein width of 5.3' and average assay of .11 oz. Au.		Ten diamond drill holes indicate a vein width of 2.6' and average assay of .42 oz. (.01 oz. Au cut)	

With only a little information available on the diamond drill holes, it is difficult to judge the size and shape of the faulted vein segments. The West fault is the only major fault whose attitude can be clearly seen at the surface. This fault dips 60 to 65 degrees east. Assuming the average dip of the Vollaug vein as 37 degrees, the West fault cuts off the "A" ore block at a depth of 900 feet down the dip of the Vollaug vein.

Diamond drilling suggests the West fault is a normal fault and erosion has stripped a large part of the vein on the west side of the fault. (See map showing Cross Section of Vollaug vein".)

20/3/50