

INTERIM REPORT

on

FLYING DUTCHMAN and H. B. GROUPS

on

Hall Creek

Nelson Mining Division
West Kootenay District
British Columbia.

To
Liberty-Lorne Syndicate,
P. O. Box 278,
NELSON, B. C.

By
THOMAS BROWN,
Consulting Mining
Engineer,
NELSON, B. C.
March 21st, 1935.

Dear Sirs:

In accordance with your instructions, I have examined the underground workings of the Flying Dutchman Group and the H. B. Group and beg to submit my report.

LOCATION

The Flying Dutchman Group of Mineral Claims is situated on the Southern slopes of Toad Mt., extending down into Hall Creek. The Group consists of fourteen mineral claims, two of which are Crown-Granted, and twelve held by location, with an estimated area of 700 acres.

The H.B. Group lays on the South slope of Hall Creek and adjoins the Fern Mine, on the West. The Group consists of five full claims held by location, and an area of 250 acres.

Both Groups are served by a wagon-road, of some four miles in length, connecting with the main auto highway and the railway at Hall's Siding, a station on the Spokane Branch of the Great Northern Railway, 11 miles south of Nelson, B. C.

(See blue print supplied by Syndicate)
Map #1.

TOPOGRAPHY.

Both groups of claims are situated on steep mountain slopes arising out of the valley of Hall Creek.

The Toad Mt. or North side is steep, but comparatively easy of access; the H.B. ground or south side being more precipitous and rugged.

GEOLOGY

The rock formations within the area of the Flying Dutchman is composed of members of the Rossland Volcanic Group. In the mine tunnels, as far as seen they consist of greenstone schists and augite porphyrites.

Quartz fissure veins cut these rocks at a high angle striking northerly towards the higher ground of Toad Mt., and dipping 68° westerly.

Numerous veins are reported as having been uncovered on the property, and doubtless other veins remain to be found by surface exploration.

On the H.B. Group the tunnels are in the Rossland Series, and are evidently in close contact with the Nelson Granite Btholith of Dominion Mt., on the south. Heavy timber, rock slides and gravel wash obscures the contact at this point.

MINERALIZATION

The ore deposits on the Flying Dutchman Group, as far as seen, occur in fissured zones of undetermined extent. A strong quartz vein, containing variable amounts of iron sulphide, has been cut and drifted on, in the Flying Dutchman Claim. In the floors of both tunnels sulphide enrichments occur at or near the hanging wall, representative samples of which were taken.

There was comparatively little oxidation showing in the vein and the wall rocks, along the fissure, are quite free. No copper sulphide was visible in this vein.

A strong vein is reported on the Rainbow claim, and large samples showing clean chalcopyrite were shown. The ore is contained in a matrix of green schist and should prove to be valuable copper-gold concentrating material. The outcrop, being heavily covered with snow, could not be visited.

DEVELOPMENT

The two tunnels of the Flying Dutchman are the only workings available for examination at this season of the year. Some seven feet of heavy packed snow covered the ground at the time of our visit and prevented any attempt to examine the surface operations on the other veins.

NO. 1 TUNNEL

The upper tunnel (NO. 1) is a drift, on the vein, and has been driven North along the hanging wall for a distance of 38 feet. At the face a crosscut has been driven East for 10 feet. The vein here shows a width of 13 feet 6 inches.

A sample was cut across the fullwidth which assayed:

<u>Sample #1 -</u>	Gold	\$4.90
	Silver	.30
	Total	<u>\$5.10</u>

At the portal of this tunnel, in the floor and about one foot from the hanging wall, is a sulphide enrichment 15 inches in width. A selected sample, carrying about 20 per cent sulphides, was taken. This assayed:

<u>Sample #2:</u>	Gold	\$58.80
	Silver	.45
	Total	<u>\$59.25</u>

NO. 2 TUNNEL.

This tunnel, 55 feet below No. 1, is entered through a 145 foot curving crosscut which cuts the vein at a right angle. A drift 87 feet long follows the quartz vein, striking North 5° East.

Five samples were cut which gave the following results:

	<u>Gold</u>	<u>Silver</u>	<u>Total</u>
<u>Sample #3</u> 15 ft. North of Crosscut, 1 ft. block quartz on hanging wall.	\$ 6.65	20¢	\$ 6.85
<u>Sample #4</u> 25 ft. North of crosscut Width, 6 ft., 6 inches.	\$ 6.65	50¢	\$ 7.15
<u>Sample #5</u> 45 ft. North of crosscut Width, 5 feet, 6 inches	\$ 5.60	50¢	\$ 6.10
<u>Sample #6</u> 55 ft. North of crosscut Width 5 feet.	\$ 4.90	^{40¢} 40¢	\$ 5.30
<u>Sample #7</u> Selected sample 75 feet N. of crosscut Width - 2 feet.	\$14.35	35¢	\$14.70

(Gold at \$35.00, Silver at 50¢)

H. B. GROUP

This group of five Claims adjoin the Fern Gold Mining Group on the West. On H. B. No. 1 Claim two tunnels were driven by the original locaters, many years ago. Only

the upper tunnel could be entered. This is a 25 ft. prospect tunnel, driven to explore several small oxidized quartz seams. A representative sample was taken which gave the following results:

Sample #8.

Selected Quartz & Iron S.

Width - 4 inches.

Gold	\$ 1.40
Silver	.30
Total	<u>\$ 1.70</u>

The No. 2 tunnel, 50 ft. lower in elevation, is now caved. It is reported to have been driven 50 ft. West in the direction of No. 1, with a crosscut of 30 feet to the North.

On the H. B. Claim a 30 ft. crosscut has been driven South in the greenstones, cutting an East West vein. This was drifted on for 28 feet Westerly to a fault, and for 65 feet beyond the fault. No assays of value have been reported. At the time of our visit the tunnel was closed by ice. A number of undeveloped outcrops are reported on this Group.

SUMMARY

Development of the Flying Dutchman Group and its wide, vein system, is fully merited from the results obtained.

In #2 tunnel, a change of 20 degrees W. in direction of the drift in the last 22 ft. has left the vein in the East wall. Returning to the point of deviation, the drift should be driven North 10° East, to pick up the vein.

Wide ore bodies are reported from reliable sources, to have been traced over long distances on the surface. These will doubtless prove to be more or less lenticular in form and require connecting up by tunnelling on the strike of the vein system. The average width and values obtained are sufficient to fully warrant large development operations.

H. B. GROUP

The situation here, while obscure at the present stage of development, also warrants exploration.

Numerous veins cross the Fern Group and adjoining properties, at slightly different angles. Those that strike East West have, to date, proved low in gold values. These veins should be further developed, more especially at their intersections. Exploration should be directed to uncover the veins striking nearer North East by South West as in the case of the Fern vein.

The Fern Vein quartz did not carry high values in gold. The high grade ores carrying tellurides were found in shoots, along the hanging wall.

CONCLUSIONS

The properties of the Liberty-Lorne Syndicate promise well, at their present stage of development.

The size and persistence of the veins, as reported, are in part confirmed, by the work done to date, and the values obtained, are high enough to warrant exploration and preparation for their development on a large scale.

The situation of these properties is exceptional; transportation, cheap electric power, water and timber are all available.

The treatment of its ores present no difficulties, flotation and cyanidation, are the means employed within this District.

This property fully merits the necessary expenditures for equipment and development.

Respectfully submitted,

"Thos. Brown"

Thomas Brown,
Consulting Mining Engineer.

Seal.