PE-119-5

Dawson Mine
(17.3, 8.5)
132°42'
55°28'N

Kassan Gold: Kx 119-8

The Kassan Gold group of claims is located on Harris Creek, about 2 miles by trail from Hollis.

The Kassan Gold Company had spent considerable money on this property before it was taken on a 25-year lease by Dawson and Wooton in 1936. A shaft had been sunk 700 feet on a 26° slope and 2,600 feet of drifts and raise had been driven, 1,000 feet of which was driven on one level. A five-stamp mill, concentrating tables, flotation cells and other equipment were installed in a mill building at the collar of the shaft. Three or four other veins had been prospected by short drifts or trenches. The production reported by this company was $160,000.

The present vein that is being mined is exposed for about 150 feet on the strike at 560 feet elevation. It is cut by a fault on both ends and the downward extension of the vein is faulted about 40 feet below the surface. The direction of throw of the strike faults was not determined, but the fault which cuts the vein on the dip shows a displacement which would leave the downward extension of the vein above this segment. The vein strikes N. 75° W. and dips 80° N. and is 5 feet wide. The vein filling is quartz and the minerals present are pyrite, galena, sphalerite, minor chalcopyrite and free gold.

Two other veins, the Humbolt and the Knowlton, have had drifts driven for short distances on them. These veins may possibly be segments of the vein that is being worked. The Humbolt vein is to the west and the Knowlton to the east of the vein that is being mined.

The vein occurs in a black slate which is one of a series of metamorphosed sediments that are cut by several acidic dikes. The vein minerals are pyrite, galena, sphalerite, free gold, minor chalcopyrite, and manganese. The principal vein filling is white quartz which is shattered and iron stained at the present exposure.

Samples taken on the main vein assayed as follows:

Location	Width	Ounces per ton Gold	Silver	Value
West end of drift	18" on H.W.	.60	1.28	$21.57
" " " "	3' on F.W.	.26	.76	16.44
Massive pyrite		.78	17.68	35.10
Quartz with fine galena		7.98	9.30	283.45
Drag west end of drift		85.64	329.24	3144.20

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Commissioner of Mines

Samples from Humbolt drift:

Location	Width	Ounces per ton Gold	Silver	Value
1st set south from water course	4½'	.28	.36	$ 9.96
2nd set " " x-cut	2'	Trace	1.16	.52
Quartz 150' from portal	3'	"	.70	.32

Samples from Knowlton drift:

Portal	3'			Nil
Portal (quartz-pyrite specimen)		.18	.72	6.63
Upper Knowlton drift	2'	.10	1.36	4.11
1st creek east of Knowlton drift, upper vein on F. W. (50% pyrite, minor galena)	2'	.80	7.20	34.00

The property is equipped with a 2'x4' rod mill which is located just below the vein outcrop. The mill was designed by Dawson and was made by the Enterprise Machine Works of Seattle. The total weight is 1,500 lb., the heaviest part weighs 700 lb. and the cost was $500. Spruce boards 3/4-inch thick are used as backing between the shell and liner. The mill has a capacity of 12 to 15 tons in 24 hours and is operated at 36 R.P.M. by a 6 H. P. gas engine. A 4"x6" Straub crusher is run by a 3 H. P. gas engine. The free gold is caught on burlap sacks which are used in place of amalgamating plates. The sacks are placed on boards which have about the same slope as amalganating plates and the sacks are cleaned twice a day by brushing and washing the gold out with a whisk broom. The mill tailings are conveyed to the old mill building through an inch pipe and run over the old Wilfley table when a sufficient volume has accumulated. About one-half of the values occur as free gold and are caught on the burlap, and the concentrates run about $190 per ton. The first 40 tons milled ran $58 a ton, the present heads as estimated by Dawson are $40 a ton, and he estimates the vein will average $30 across 5 feet. The total production has been $16,000 to $17,000. The mill is being run 8½ hours a day and 5 tons are put through the mill in that time.

The property needs detailed mapping and an examination of the geology in order to trace the extension of the vein along the strike. The direction in which the downward extension of the vein lies is known to be above the present outcrop and it may be cheaper to prospect for the extension by diamond drilling as the amount of throw is not known.