1150 U04686

A. JOHNSON SUBMISSION, LONE STAR MINE PROPERTY, VICTORIA GULCH, Y.T.

September, 1978

SEP 8 1978

I.D.B.
A.H.C.
P.S.C.
W.J.
S.P.
M.D.R.
J.B.S.
FILE

GS
Send a copy to W. Smolin please
FILE

copy sent 10/10/78 - GS.

PRODUCT	GOLD	PROVINCE OR TERRITORY	Yukon	N.T.S. AREA	115 O/14	REF.	Au 5

NAME OF PROPERTY: LONE STAR MINE

OBJECT LOCATED -mine.

UNCERTAINTY IN METERS-400. Lat. 63°53'30" Long. 139°13'25"

Mining Division: Dawson District:

County: Township or Parish:

Lot: Concession or Range:

Sec: Tp: R:

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

"Numerous veins, lenses, stringers, and irregular bodies of quartz occur in a large sericitized and pyritized shear zone that strikes about N50°W and dips 50°-70°SW. The zone is 300 to 400 feet wide and has been traced to the northwest for 1,500 to 1,600 feet. MacLean (1914) states that this shear zone outcrops at the head of Thirteen Pup, 1,000 to 1,500 feet southwest of the open-cut. The rock in the zone is sheared Klondike schist. Fresh surfaces are white with rare green chloritic patches. On the weathered surface the pyrite oxidizes and colours the rocks light brown. Zones of clay material are common, and they probably represent fault gouge within the shear zone.

"Gold is associated with quartz veins and stringers; some parallel the schist, but others, although similar in strike, dip 25°-35°NE or at about right angles to the dip of the shear zone. The gold occurs as yellow flakes and grains in quartz and in the

see Card 2 ....

Associated minerals or products of value - Silver.

HISTORY OF EXPLORATION AND DEVELOPMENT

The Lone Star group of claims is located near the head of Victoria Gulch on the divide that separates Bonanza and Eldorado Creeks. A triangle of ground about 4 miles wide is enclosed by these Creeks. The richest placers of the Yukon were found in these creeks, at this locality. Apparently the gold was carried into the creeks from this triangle. The Lone Star and Bonanza mineral claims, on which the mine is situated, were staked in 1899. And in 1909, the Lone Star Company, Limited, was organized by Dr. W. Catto.

Two main zones, designated the Corthay vein and the Boulder lode, were discovered. The Boulder lode, which is 3 to 10 feet wide at the surface, contains 1 to 7 feet of quartz as lenses, sheets and irregular bodies interbanded or interfoliated with the schists. The Corthay vein resembles a compound fissure vein and consists largely of quartz which is in most places 3 to 6 feet thick. The deposit is not a definite vein or lode but rather a crushed zone in the sc ists.

Between 1909 and 1914 development work was done, consisting of mining an open-cut 150 feet by 20 feet by 20 feet along the strike of the showing. In addition, an adit and several drifts were opened about 60 feet below the surface, under and in the vicinity of the open-cut. A small st mp mill was built and was in operation between 1912 and 1914. During this period, 8,435 tons of rock from the open-cut was mined and milled yielding $24,976. In the summer of 1912 an average of $3.79 per ton was recovered.

The mill was equipped to recover free gold only, thus the values from the sulphides were lost. However, in 1913, the company received $1,846 from the Selby Smelting & Lead Company after the latter company had treated 1,864 tons of hand-picked sulphide rock from the mine.

During mill tests the workings from which the ore came were sampled but the weighted average of samples was only 77¢ a ton. And assay returns from 49 samples taken by MacLean (1914) were uniformly low. The best value was from a sample of quartz containing metallics, and it assayed 1.06 oz./ton Au and 0.43 oz./ton Ag. Subsequent sampling of the property returned low values.

see Card 2 ....

512216

PRODUCT	GOLD	PROVINCE OR TERRITORY	Yukon	N.T.S. AREA	115 O/14	REF. Au 5

NAME OF PROPERTY LONE STAR MINE

DESCRIPTION OF DEPOSIT (continued)

schist wall-rock near the quartz veins. There is some indication that much of the gold is associated with the northeast-dipping quartz veins. Here and there are small pockets of sulphides commonly comprising pyrite, galena, and sphalerite (specks of chalcopyrite have been noted); these weather dark brown and invariably carry good gold values. One such small rusty seam assayed 6.19 ounces of gold and 0.98 ounce of silver per ton, and the schists around the rusty spot gave gold values of 0.093 ounce and 0.03 ounce of silver per ton. Unfortunately these rich pockets are not common. Samples of quartz taken by the w iter from the shear zone average 0.01 ounce of gold and 0.03 ounce of silver per ton. Heavy minerals present in the shear zone include goethite (pseudomorphous after pyrite), barite, epidote, sphene, apatite, biotite, hornblende, hypersthene, ilmenite, magnetite, martite, garnet, zircon, dolomite, and monazite." (Gleeson, 1970, pp. 15-16).

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

In 1930 Cockfield (M 284, p. 618) stated, "If the mill tests are to be accepted there may be a very large tonnage of rock of this grade .... There is thus the possibility of a zone of very considerable width carrying $3 values" (gold at $20.67 an ounce).

Gold specimens may be obtained from the workings; one grab sample, containing pyrite and galena but no free gold, assayed $40 to the ton.

The Company was driving an adit in 1929 and a crosscut was driven 196 feet in 1930. From the point where the workings intersected the mineralized zone a drift was started towards the shaft. Trenching and sampling by a consulting geologist in 1935, exposed a zone of mineralized schist reported to be 200 feet wide, averaging $4 a ton (gold at $35 an ounce).

In 1946-47 Yukon Consolidated Gold Corporation Limited did 200 feet of crosscutting underground, bulldozed eight trenches, and drilled six churn drillholes.

HISTORY OF PRODUCTION

Between 1912-14 a total of 10,299 tons were milled yielding $26,985 (gold at $20.67 an ounce and silver at $0.55 an ounce).

MAP REFERENCES

*Map 115 O/14, Grand Forks, (Topo.), Sc. 1:50,000.
Map 772, Klondike Mining District, (Geol.), So. 1":2 miles - accomp. G.S.C. Ann. Rept. Vol. 14, pt. B, 1905.
Map 711 A, Ogilvie, (Geol.), Sc. 1":4 miles.
Fig. 16, Locations of high-level gravel samples, lode deposits, and active placer operations, So. 1":6 miles, on page 28 of G.S.C. Bulletin 173.
#Map 221, Dawson Mining District Showing Locations of Some Quartz Deposits, (Geol.), Sc. 1":2 miles - accomp. Mines Br. Publ. 222.
Map 4309 G, Grand Forks, (Aeromag.), Sc. 1":1 mile.
Map 7854 G, Stewart River, (Aeromag.), So. 1":4 miles.

REMARKS

Comp./Rev. By	AJ						
Date	5-74						

REFERENCES

MacLean, T.A.; Lode Mining in Yukon, An Investigation of Quartz Deposits in the Klondike Division; Publication 222, pp. 20-37, Canada Dept. Mines, Mines Branch, Ottawa, 1914.

Cairnes, D.D.; Quartz Mining in the Klondike district (1911); in Geol. Surv. Canada, Mem. 284, pp. 347-348, 1957.

Department of the Interior; The Yukon Territory, Its History and Resources; issued by direction of W.J. Roche, Minister of the Interior, 1916, pp. 139-140.

Cockfield, W.E.; The Mining Industry of Yukon, 1929, 1930; in Geol. Surv. Canada Mem. 284, pp. 597-598, 617-618, 1957.

Bostock, H.S.; Mining Industry of Yukon, 1935; Mem. 193, pp. 7-8, Geol. Surv. Canada, 1936.

Cook, H.C.; Canadian Lode Gold Areas; Econ. Geol. Ser. No. 15, p. 30, Geol. Surv. Canada, 1946.

Gleeson, C.F.; Heavy Mineral Studies in the Klondike area, Yukon Territory; Bulletin 173, pp. 15-16, 50, Geol. Surv. Canada, 1970.

Green, L.H.; Lode Mining Potential of Yukon Territory; Paper 67-36, p. 7, Geol. Surv. Canada, 1968.