

004133

Property File

082K SE001

REPORT OF EXAMINATION

of the

MINERAL KING MINE

Otherwise known as the Silver King Mine

INVERMERE, B. C.

To E. A. Julian, Manager,  
Goldfield Cons. Mines Expl. Co.

By Chas. C. Starr,  
July 29, 1928.

*See also  
Julian-Eichelberger Files*

## INTRODUCTION:

The property has been visited twice; once in June 1925 and in July of this year. A few hours were actually spent on the property on each trip, probably about eight hours altogether.

## LOCATION:

The property is situated in the Golden Mining Division on the north side of Toby Creek about 25 miles west of Invermere which is  $1\frac{1}{2}$  miles from the station of Athalmer on the Kootenay Central Railway, (C.P.R.).

## TRANSPORTATION:

A road of fair up-grades leads from Invermere to the foot of the hill below the mine, following Toby Creek for the whole distance. The lower end of the road is good, but the upper end is narrow and rough; there are a few reverse grades that would prevent the hauling down of maximum loads unless the road is changed.

## TIMBER, WATER &amp; POWER:

A large part of the timber on the claims has been burned off but sufficient for mine use can be obtained near by. Water is scarce at the mine, but plentiful in Toby Creek three-quarters of a mile below the mine. There is plenty of water for power purposes in Toby Creek, although the fall is not very great; several side creeks nearby have a rapid drop but the amount of water is probably small during the dry seasons.

## TOPOGRAPHY:

The property lies well toward the top of a ridge over which the claims extend. At the mine workings the slopes are about  $30^\circ$  and smooth, but toward the top the ground becomes rougher.

At the tunnel the elevation is about 5500 feet, and

the upper end of the road 1200 feet lower.

PROPERTY:

No information is at hand regarding the number of claims in the group, the owners, or the price asked for the property.

DEVELOPMENT:

Development consists of:- A large open cut some 20 by 80 feet by 10 feet deep; a 40 foot tunnel driven in from the face of the cut; and a tunnel 115 feet long with three crosscuts of 25, 5, and 48 feet respectively. The latter tunnel is about 45 feet below the bottom of the open cut. There are a few small cuts some of which show stringers of ore.

GEOLOGY:

In "The Geology and Mineral Deposits of the Windermere Map Area" J.F.Walker mentions the Mineral King substantially as follows:- "There is a lenticular mass of quartz 30 by 40 feet with stringers of barite and sulphide, and small bodies of sulphide, in one of the lower limestones of the Mt. Nelson Formation. Immediately below this showing the limestone rests with faulted relations on slate of the Dutch Creek formation". (The Mt. Nelson formation is late pre-Cambrian). The orebody lies in Mt. Nelson limestones, interbedded with schists, which strike N 35° to 45° W and have a nearly vertical dip to the northeast. At some 250 feet S-W of the workings these rocks are underlain by slates and interbedded thin limestones, which are of an earlier formations, according to Dr. Walker, and separated by faulting. At 50 to 100 feet northeast of the workings the Mt. Nelson series is overlain by the Toby Conglomerate. A mineralizing fissure, or shear, striking N 80° E and dipping 45° north cuts the Mt. Nelson series and passes through the open cut at the portal of the Upper

Tunnel; it has mineralized the more easily replacable beds along its course, and for a short distance out along these beds. There is some local bedding of the strata but not very much, and if the ore is localized by such folds it is not evident.

If this hypothesis of the structure of the orebody is correct, as it appears to be, it follows that the ore will pitch downward at  $45^{\circ}$  into the hill and will have no greater length and width than at present exposed.

**ORE:** The ore varies from coarsely crystalline galena in some of the surface exposures, to a fine grained mixture of galena sphalerite, pyrite, and pyrrhotite in the majority of the exposures. The gangue is silicified limestone and quartz with some barite.

**OREBODIES:** The large open cut (see map) exposes a more or less vein-like body of ore extending along a fracture, from the east end of the cut at the bottom, to the N-W corner of the cut at the top. The fracture extends westward through the lower limestones but shows only very weak mineralization west of the large cut. From the N-W corner of the cut at the cross-fissure, a band of ore extends some 30 feet southeast, and may also extend a short distance to the northwest but is not exposed. The two small cuts there are not exactly on the course of this ore and show nothing but tiny stringers of solid galena. From the cross-fissures, mineralization, (sometimes amounting to ore) extends north-west along the bedding of the limestone at the portal of the Upper Tunnel, and again a few feet to the west of the tunnel; possibly also at other unexposed points to the northwest as well as to the southeast. Rock-outcrops 300 feet, and more, northwest of the open cut do not show any mineralization, and it would seem that most of the surface ore has been pretty well outlined.

In the Upper Tunnel ore shows through most of its.

length following a limestone bed to the northwest.

In the Lower Tunnel the limestones for the first 55 feet are slightly mineralized, but do not constitute even low grade ore; from this point the tunnel swings to the westward and shows almost continuous ore to the face without any very definite boundaries showing. This ore appears to be on the downward continuation of the cross-fissures, which passes nearly through the face of the drift and through the 2nd and 1st (counted from the portal) crosscuts. Ten feet of nearly solid pyrite shows on the fissure in the 1st crosscut. The 3rd crosscut shows a fifteen foot area of ore of rather uncertain dip and strike, but which has suggestions of a northeast-southwest strike. It seems more probable that this is an irregular body of ore following a limestone bed to the northwest.

#### SAMPLING:

During my 1925 examination eight samples were taken from the solid, and are platted on the map herewith and marked "(S)". In general these samples represent the best ore exposures, and are possibly taken lengthwise of the ore in one or two instances. Three samples were taken from dumps, as follows:

Main dump from Open Cut, grab,	2.8 oz. silver,	4.8% lead,	4.8% zinc
Lower Tunnel, ore saved out apparently for shipping	7.5 " "	8.8% "	12.5% "
Lower Tunnel, grab from waste dump	1.0 " "	3.1% "	2.2% "

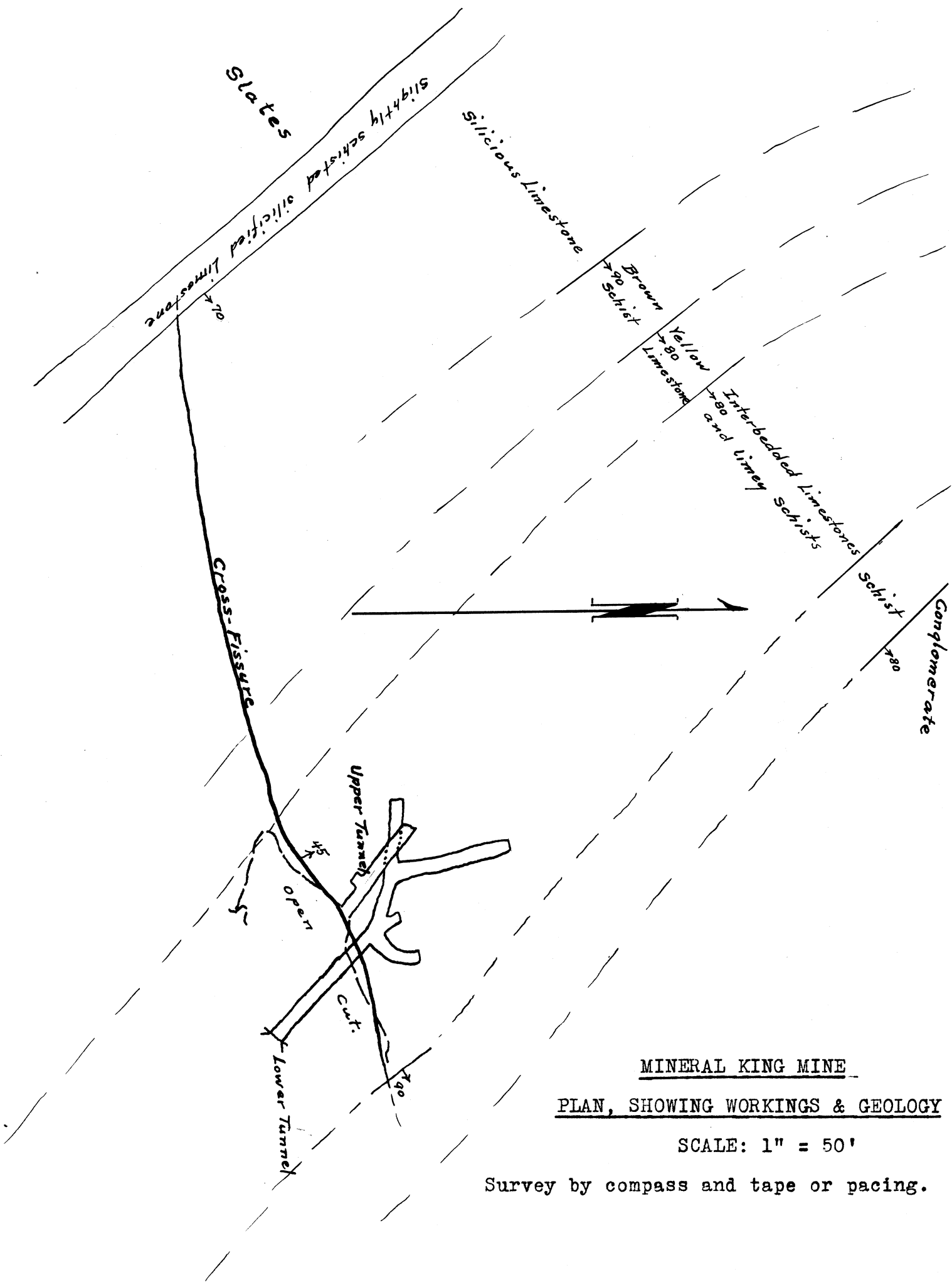
The property has also been very closely sampled by another possible purchaser who has furnished me with results which are platted on the accompanying map and marked "(A)". In plating these samples a number that were of quite low grade were omitted, as well as a few of higher grade which appeared to have been taken lengthwise of the ore.

## CONCLUSION:

The sampling shows some very good ore which has been partly developed, but the structure of the orebody indicates that it is of irregular and quite limited horizontal extent, although it may extend to considerable depth. So far as I am aware no indications of other orebodies have been found on the property.

If the property were better located as regards transportation it would certainly be worth developing further through an inclined shaft, (since the ore appears to be in the nature of a "pipe"), but under the existing conditions it can not be recommended.

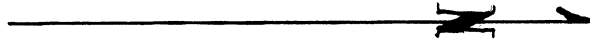
Respectfully submitted,



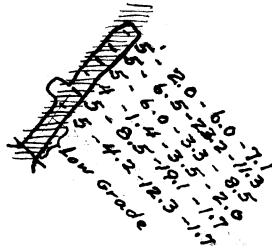
MINERAL KING MINE  
PLAN, SHOWING WORKINGS & GEOLOGY

SCALE: 1" = 50'

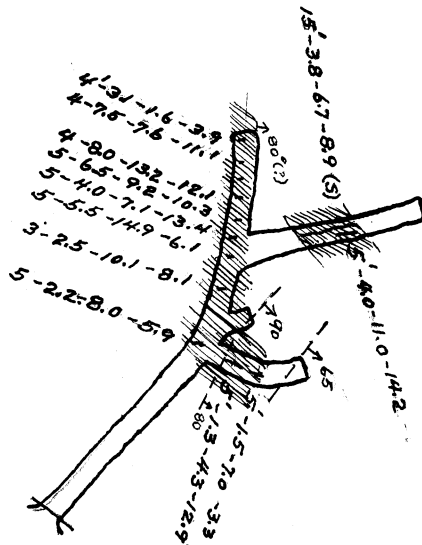
Survey by compass and tape or pacing.



UPPER TUNNEL

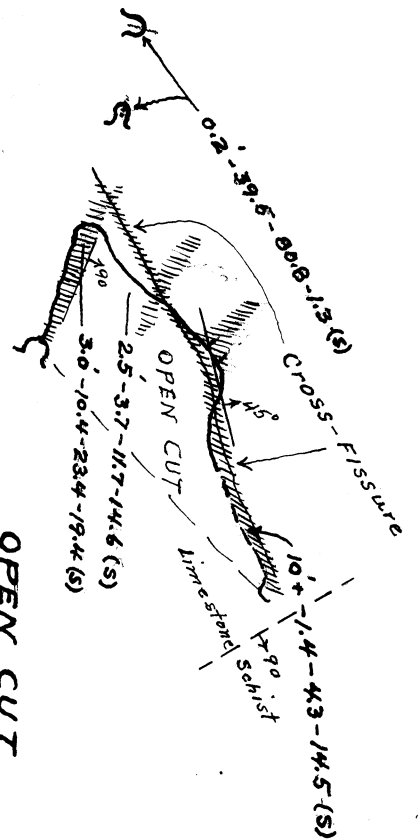


LOWER TUNNEL



Average Dip and Strike of strata on surface  
 18°

OPEN CUT



MINERAL KING MINE

SEPARATE LEVEL PLAN, SHOWING ASSAYS

SCALE: 1" = 50'.

ASSAYS are platted in the following order:

Width - Oz. Silver - % Lead - % Zinc.

ORE: //////////////