

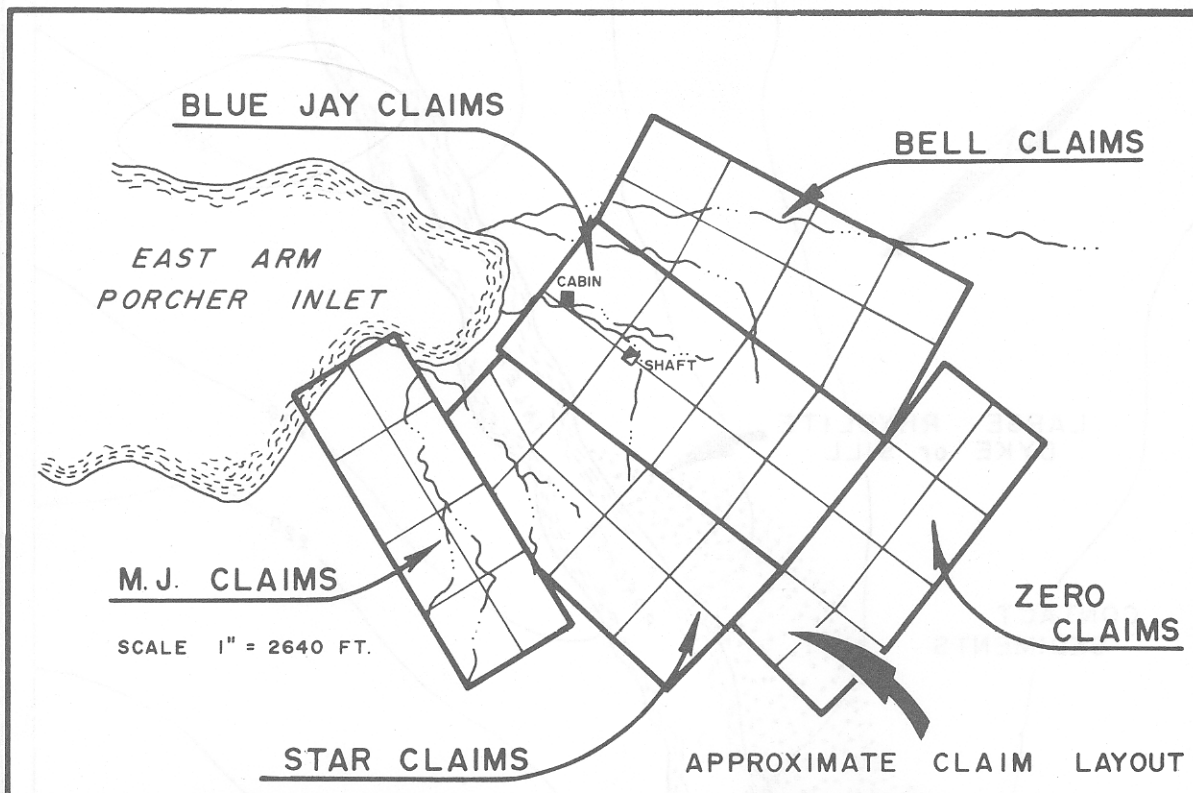
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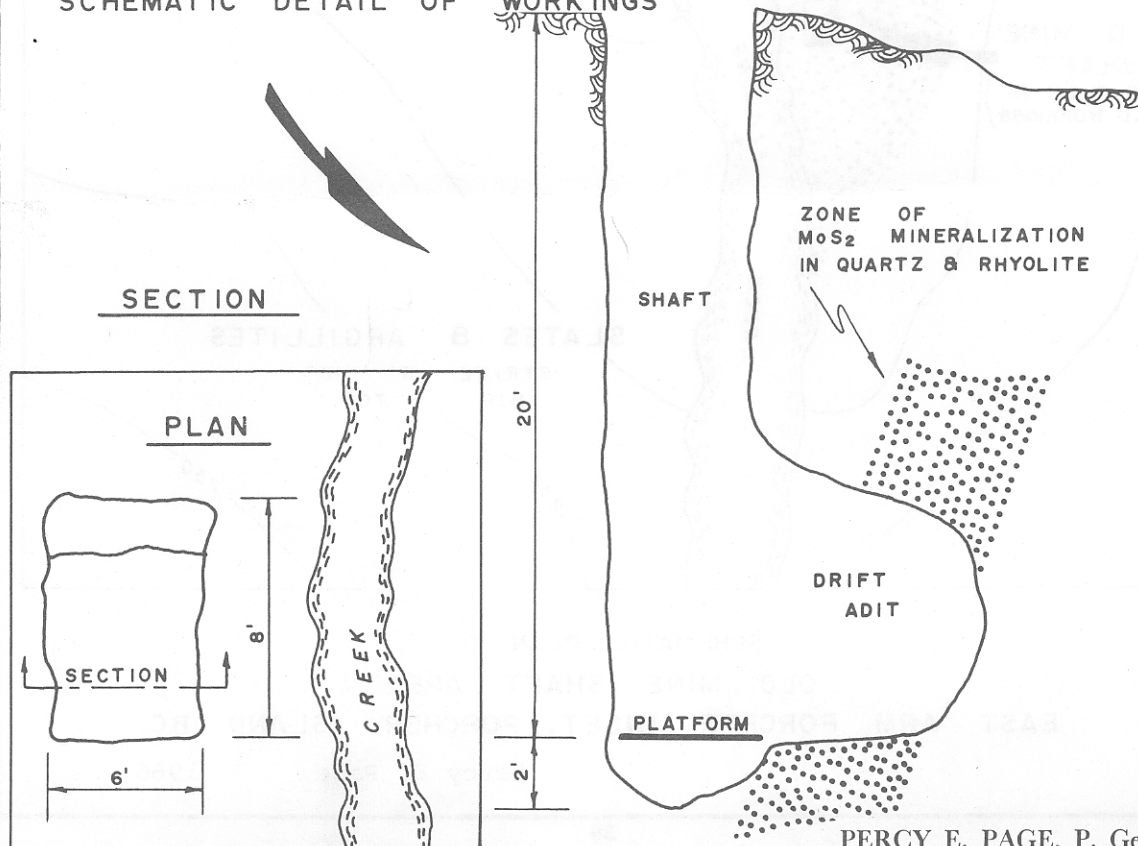
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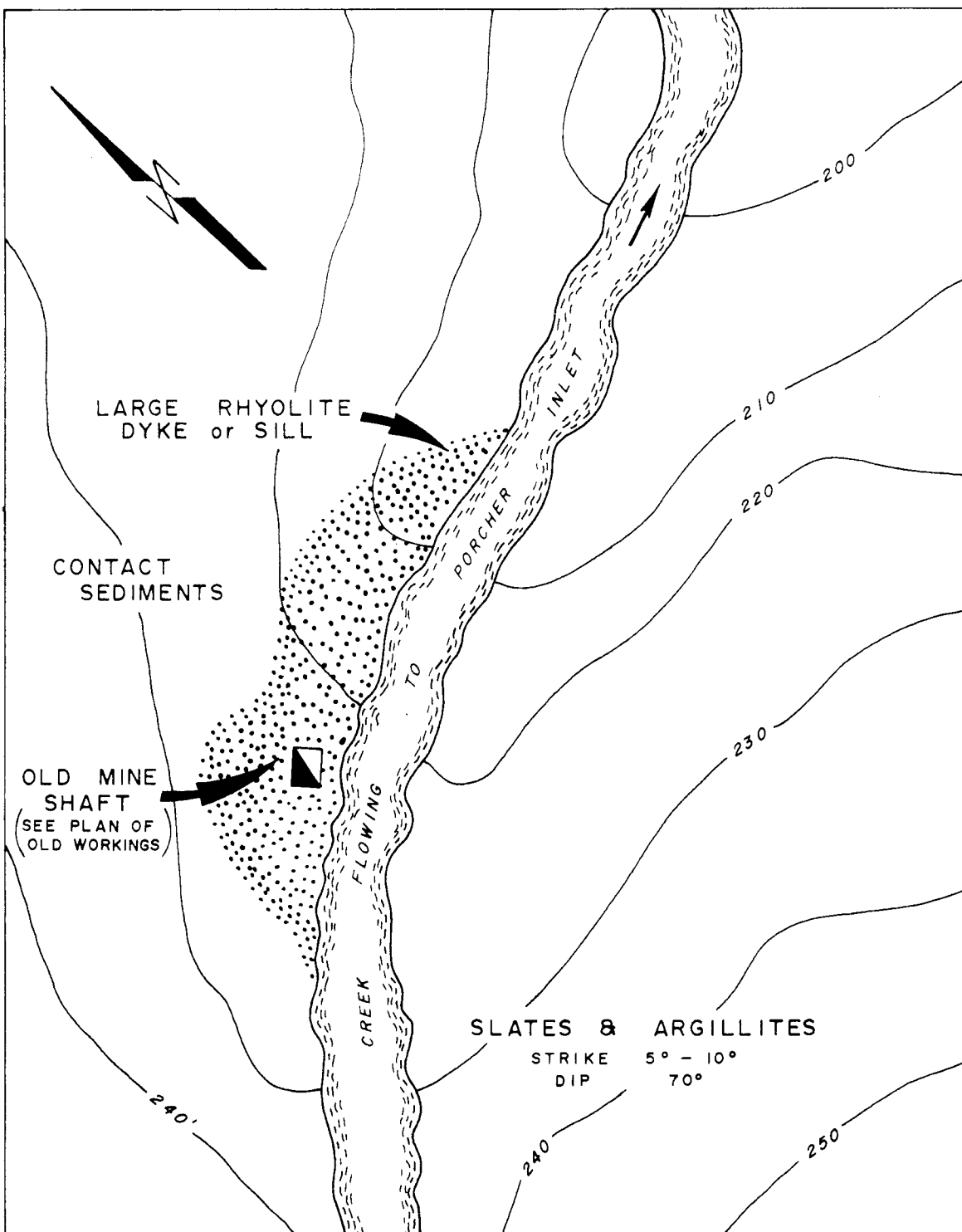
GEOLOGICAL REPORT ON FIFTY-SIX MINERAL CLAIMS
LOCATED ON PORCHER ISLAND NEAR PRINCE RUPERT, BRITISH COLUMBIA
SILVER CHIEF MINERALS LTD.



SCHEMATIC DETAIL OF WORKINGS



PERCY E. PAGE, P. Geol.



SCHEMATIC PLAN OF
OLD MINE SHAFT AREA
EAST ARM PORCHER INLET, PORCHER ISLAND B.C.

Percy E. Page, 1966

N.T.S.

GEOLOGICAL REPORT ON FIFTY-SIX MINERAL CLAIMS LOCATED ON PORCHER ISLAND NEAR PRINCE RUPERT, BRITISH COLUMBIA

Contiguous Claim Groups:

1. Blue Jay	1 - 8	2. Ray	1 - 8
Star	1 - 8	Dot	1 - 4
Bell	1 - 8		
Zero	1 - 8	3. Mac	1 - 4
M.J.	1 - 8		

Report Prepared for Five Star Petroleum & Mines Ltd.

(OPTIONED TO SILVER CHIEF MINERALS LTD.)

by PERCY E. PAGE, P. Geol.

Consulting Geologist

Edmonton, Alberta
1st September, 1966

Location and Access

The largest claimed area, surrounding the old Blue Jay Mine shaft, consists of forty mineral claims. It is located southeast from the bay at East Porcher Inlet approximately twenty-five miles south of Prince Rupert, B.C.

The second group of mineral claims is located approximately five miles northwest of the first group and extends east of the small channel joining Porcher Inlet with Salt Lagoon.

Approximately seven miles northwest a group of four claims is located near the north end of Salt Lagoon.

History

A mineralized area in Northern British Columbia is found approximately twenty-five miles south of Prince Rupert. On the map this location is indicated as East Porcher Inlet on Porcher Island; locally it is known as Kitkatla Inlet.

Early reports to the government describe small mining activities in this area. Claims stated were first recorded in 1921 when Blue Jay Mining Company commenced operations on a molybdenum occurrence a short distance upstream from the bay on East Porcher Inlet.

Evidently some molybdenite was mined from a twenty-foot shaft at this location. At that time molybdenum was of little consequence unless associated with gold or silver.

During the war years and later, mining activity in this area declined and mineral claims were allowed to lapse.

In 1965, Mr. George Royles of Prince Rupert, examined the Porcher area and re-staked a group of eight claims, covering the old Blue Jay Holdings. Later, other adjacent claims were staked under his supervision, namely; Bell 1-8; Star 1-8; Zero 1-8; and Mac 1-4.

During the early part of 1966, Five Star Petroleum & Mines Ltd. of Edmonton, Alberta entered into an agreement with Mr. Royles of Prince Rupert, B.C. to purchase the above named claims.

The Company decided on immediate appraisal of the newly acquired property and engaged Mr. H. Sanche, a geologist, to examine the mineral showing during June, 1966. His report verified the occurrence of molybdenite at the old Blue Jay shaft and nearby rock formations. However, Mr. Sanche was unable to examine any underground development as the old shaft was full of rock, water and debris at this time.

During the early part of July, 1966, the writer was engaged by Five Star Petroleum & Mines Ltd. to examine the old mine after it had been cleared to determine molybdenum values more exactly and to explore and map the adjacent area for geological structure, rock types and other occurrences of molybdenite.

Workmen were obtained and the task of clearing the Blue Jay shaft was begun. During this time, a geological reconnaissance of the claims was completed.

Examination of the open shaft and nearby property indicated molybdenum values of such consequence that recommendation was made to continue exploration by mining a larger quantity of the ore. It was also recommended to continue development work on other nearby mineral showings in anticipation of discovering sizeable ore bodies.

By mid-August, other workmen were engaged to develop the small addit (begun in 1921) and to trench nearby showings of molybdenite. This work commenced August 12 and was completed August 17. One ton of ore rock was moved from the old mine to Prince Rupert and transported to Edmonton by rail. No further work has been done on the property to date.

Geology and Reconnaissance

The claimed area is mountainous and heavily wooded at lower levels with fir, cedar, pine and hemlock, 100 and 150 feet in height. Higher mountain-

divide areas are covered with scrub cedar, pine and fir. This region is subjected to excessive precipitation (100 plus inches annually) much of which is in the form of snow during the winter months.

The southern shore of the inlet is granite rock extending south beyond the divide. The northern and eastern shores show volcanic sediments with slates and argillites. Probably these features encouraged early prospectors to search the nearby streams for minerals. Possibly the molybdenite showing on the Blue Jay claims was discovered by tracing the course of the contact between the two types of rocks.

1966 observations indicated that the mountainous country occupying the southern claims is largely granite. Volcanic sediments on the south along with slates and argillites, have been deformed from their original lineation to approximately an east-west direction near the mine shaft and continuing seven hundred yards eastward. Other sedimentary rock structures exposed in nearby creek beds tend to parallel a north-west southeast direction. Adjacent north, a strong structural feature—probably a fault zone—tends due east from the bay.

No detailed geological mapping of this area has been done by the Geological Survey of Canada. There are no geological memoirs available for reference. However, old reports to the British Columbia Minister of Mines describe mining activities of this area extending back to the turn of the century.

At the old Blue Jay shaft, a large body of Andesite or Rhyolite has intruded the slates and argillite sediments as lenses, sills and dykes. Mineralized quartz veins in and adjacent to the rhyolite appear to control the occurrences of molybdenite and pyrite.

Two other veins of molybdenite mineralization were discovered on the claims during July, 1966. The first is located several hundred feet east of the mine shaft (apparently along another rhyolite intrusion). The second is located several hundred yards southwest of the mine shaft where a large rhyolite structure forms the bed of a small stream. This location is near to the granite intrusion on the south.

During August, several other molybdenite showings were found on the property.

The immediate area of the mine shaft is heavily covered with trees and overburden. Bed rock exposures are to be found only on the small creeks along their upper gradients. The mineral bearing veins may extend to ore bodies at depth; but the area of interest appears to be a series of rhyolite or andesite sills in the volcanic sediments lineated parallel to their contact with the intrusive granite on the south.

The Blue Jay Mine Shaft

Many years ago, the 6' x 8' shaft, approximately 20 feet deep, was excavated on the site of the mineral discovery. It is located much too near to the stream and if the shaft is to be deepened, the opening should be collared with cement to prevent flooding during high water.

The excavation is vertical cutting through warped sediments and following the "hanging wall" of the nearby vertical dip.

At a depth of 14 feet, the shaft contacts a large mineralized quartz vein in rhyolite. Apparently several tons of good quality ore rock were mined and taken to the surface leaving the beginning of an addit.

For many years, this shaft was full of mud, rock, water and debris. This fill was finally removed 21st of July, 1966.

Three containers were available within the small addit when it was finally cleared for examination. Two were held against the opposite faces of the vein and samples chipped into each while the third container was filled with non-mineralized country rock. The total sample weight was 90 lbs.

It was noted when collecting samples, that fractures occurred at joints of molybdenite with resultant mineral loss when rock was handled. For this reason, assay values obtained were probably less than values from more complete samples.

During mid-August, a windlass was erected over the old shaft and several mining men worked and blasted extensions to the addit, removing approximately one ton of molybdenite ore with very little waste rock discarded. This ore rock was returned to Edmonton where representative amounts were pulverized and assayed.

The first samples were sent to Atlas Testing Laboratories, Edmonton; J. T. Donald & Company, Montreal and Coast Eldridge of Vancouver, B.C. The certificates of Assay are included with this report.

Twenty-four evaluations were made from the half ton of ore received in Edmonton before the rail strike. These were completed by Atlas Testing Laboratories and the certificate of assay included with this report.

Additional assays from the remaining half-ton of molybdenite ore will be obtained and submitted later. They are expected to average slightly higher than those obtained from the first half ton of ore.

Mining and Exploration

The mining operation undertaken in August, 1966 indicated an increasing amount of molybdenite ore, approximately a percentage of 0.2 MoS₂.

Many more tons are available from the present shaft and there are indications of the ore body extending to greater depth.

A small mining operation could be undertaken at the present time but good mining practice requires that exploration be done by diamond drilling preliminary to further development.

Assay Results

As noted on attached reports, approximate percentages MoS₂ were as follows:

1. Vein ore rock one side of addit 1.5
2. Vein ore rock other side of addit 0.65
3. Country rock 0.05
4. Average of 24 samples 0.2

Recommendations

1. Formations adjacent and/or underlying the old Blue Jay 20 foot shaft should be diamond drilled to determine extent and depth of molybdenite mineralization. (1,000 feet of cores, minimum.)
2. This exploratory diamond drilling should be done to obtain A X gauge cores as the comparatively soft molybdenite in larger veins is washed away when penetrated by the smaller diamond bit.
3. At least two 100 ft. diamond drill holes should be located at the No. 2 showing southwest of the old mine shaft.
4. The cost of diamond drilling is estimated at \$20.00 per foot.

(signed) PERCY E. PAGE, P. Geol.
Edmonton, Alberta.

CERTIFICATE

I, Percy E. Page, of the City of Edmonton, in the Province of Alberta, CERTIFY:

1. That I am a consulting geologist and reside at 10941 - 90th Avenue, Edmonton, Alberta.
2. That I am a graduate in Geology of the University of British Columbia, and have been practising my profession of Geology for the past sixteen years.
3. That I have no direct or indirect interest whatsoever in the oil and gas leases, subleases, licenses or reservations or mining properties of Silver Chief Minerals Ltd. except that I have subscribed for 1000 shares of the Company.
4. That the accompanying report is based on personal experience re the area concerned.

DATED this 31st day of May, 1967.

PERCY E. PAGE, P. Geol.

SUMMARY OF ASSAY REPORTS

Sample	Date	Atlas Testing Laboratories Ltd.	Coast Eldridge Engineers & Chemists Ltd.	J. T. Donald & Co. Limited
No. 1	August 30, 1966	1.49% MoS ₂	1.61% MoS ₂	1.39% MoS ₂
No. 2		0.65% MoS ₂	0.69% MoS ₂	0.53% MoS ₂
No. 3		0.05% MoS ₂	0.08% MoS ₂	0.06% MoS ₂

PRELIMINARY REPORT ON PROPERTY EXAMINATION OF THE BLUE JAY MOLYBDENUM SHOWINGS PORCHER INLET, BRITISH COLUMBIA FOR FIVE STAR PETROLEUM & MINES LTD.

1036 013

(OPTIONED TO SILVER CHIEF MINERALS LTD.)

Summary

The writer examined the Blue Jay Showing and shaft workings on August 19th. A bulk sample has been taken from the shaft under the direction of Mr. Percy Page, B.Sc. In acquiring this sample a short drift has been driven on two adjacent but distinct quartz veins encountered at the shaft bottom, a depth

of approximately 20-25 feet. In this drift molybdenum values may be observed over widths in excess of 4 feet. The quartz veins are a contact feature between well banded dark sediments and overlying igneous rocks consisting of rhyolite, quartzite and altered granites. The banded sediments themselves are characterized by minor quartz veins and stringers in the contact area.

Geology

A large portion of the property is believed to be underlain by granite. A contact zone is apparent in the vicinity of the showings on which the shaft has been sunk. The rocks bordering the granite are metamorphic and in places occur as well stratified sediments. Molybdenum was noted to occur in quartz veins which are a contact feature. These veins strike northerly and dip steeply to the east. Values were noted also in the altered hanging wall. Adjacent to the quartz vein foot wall small quartz stringers may be noted in the banded sediments which may be expected to represent the source of minor molybdenum values. The attitude of the quartz veins appear to conform to the bedding planes in the sediments. Wall rock, both hanging and foot wall are pyritized.

Recommendations

1. From the bulk sample which has been obtained, collect a suite of vein and wall rock types representative of the contact zone. This suite to be used for the purpose of a microscopic study.
2. Obtain a reliable assay on the bulk sample.
3. Position three diamond drill holes in a manner designed to obtain vertical intersections at 50 feet, 100 feet, and 150 feet, directly below the surface showing on which the shaft is located. This would involve approximately 500 to 600 feet of drilling.
4. Submit drill core samples for study to determine an

applicable geophysical procedure for following any ore occurrence in the lateral direction.

5. Conduct a geophysical survey, of the determined nature, over the property, at least in the immediate vicinity of the shaft area, but preferably cover the area represented by the Blue Jay group.
6. Outline a diamond drilling program to investigate any anomalous conditions disclosed by the geophysical survey.

Conclusions

The structure and formation witnessed suggests to the writer that there is a good possibility of tracing the molybdenum bearing intrusives to depth. If depth possibilities are established this will definitely enhance the probability of establishing significant lengths. Grade is of prime significance in vein type deposits but widths as noted could well be of interest. In the surface outcropping molybdenum values are noted over very narrow widths only, but in the 20 feet of depth penetrated by the shaft an appreciable increase in widths of vein, and also of the total width of mineralization is apparent. In the writer's opinion, this prospect warrants further investigation, and for this purpose the recommendations outlined above are advanced.

August 22, 1966

Your truly,
J. FOSTER IRWIN, B.Sc., P. Eng.

