

*Tillen may have work*

*\* See letter Ashcroft*

82K/12E  
82K/NW-3

REPORT ON THE LUCKY BOY PROPERTY,  
TROUT LAKE, LARDEAU MINING DIVISION.

Reference: G.S.C. Memoir 161, Lardeau Map-area, British Columbia,  
Walker, Bancroft and Gunning.

003800

*by J.S. Stevenson*

This group consists of seven Crown-granted and thirteen located claims held by C. H. Tillen of Trout Lake and Lethbridge. Six of the Crown-granted claims and two of the located claims constitute the original Lucky Boy group and were obtained by Tillen on lease and bond from George Yuill of Trout Lake. The remaining Crown-granted claim, the Horseshoe, adjoins the Lucky Boy claims and was obtained by Tillen on lease and bond from Lance Hillman of Ashcroft. Of the remaining located claims seven were staked by Tillen east and west of the Lucky Boy--Horseshoe group; four more, adjoining and south of the others, were obtained from Archie Oakey of Beaton under lease and bond. These last four claims were known previously as the Copper Chief group.

" The property is located due west of the town of Trout Lake and is accessible from that centre by 3½ miles of foot trail on excellent grade. It would be a simple matter to convert this trail to road at low cost as little rock work would be involved." The property is located on the slope of Trout Mountain which faces north-westward, at an elevation of 4500 feet. The slope of this side of the mountain varies from 15 to 35 degrees and presents adequate sites for construction or collaring of underground development. Overburden and growth is heavy and adequate timber is available for all needs. The camp consists of three buildings in fair condition, adequate for six men. Domestic water supply is poor, being obtained from a small creek



approximately 1000 feet distant from the camp. Any milling operation would necessarily be conducted on Trout Creek, 1500 feet distant from the workings.

The property was staked and worked originally for silver-lead ore which occurs in quartz veins in the schists and limestones of the Lardeau series. The vein strikes slightly north of east, dips at 20 to 30 degrees southward. Vein widths vary from 6 inches to 3 feet, with an average width of probably little more than 14 inches. Vein gangue is quartz and sulphide mineralization consists of galena, tetrahedrite, zinc blende, chalcopryrite, pyrite and a little native silver. Scheelite is present in the vein apparently in association with the sulphide mineralization. The wall rock is predominatly schistose although, at several places in the underground workings, limestone appears to form the hanging-wall. The planes of schistosity strike south 50 degrees east and dip almost vertically.

Prior to 1906, 400 tons of sorted ore were shipped and assayed: silver, 200 to 300 oz.; lead, 20% to 35%. In 1912, after six years of inactivity, 28 tons, assaying about the same, were shipped.

Several shallow and short adits have been driven from the surface along the strike of the vein apparently in an effort to locate a shoot of ore within the vein. Most of this work was on the original Lucky Boy claim; some of the remainder was on the adjacent Horseshoe claim. The principal underground working is accessible from an incline sunk on the vein at a location where the operators decided the best showings of ore were present. This main working and some of the Horseshoe workings provide the only underground exposures now



accessible. Even these are in very poor condition and would require re-timbering and considerable removal of loose rock before development could be conducted safely. The Lucky Boy incline extends downward on the vein in a south-eastward direction for approximately 190 feet. From this three levels have been driven as drifts on the vein at distances of approximately 65, 85, and 155 feet from the collar of the shaft. The highest, or No. 1, level is driven westward from the incline and little stoping has been done above it. The vein as exposed in this level has widths ordinarily between 6 and 10 inches and contains little sulphide. Practically no scheelite is contained in the vein at this location. The level is accessible from the incline for about 60 feet. Past this it is possible to proceed farther westward through a series of holes which are a part of stoped ground from lower levels and prospect raises from the elevation of No. 1 level. Although it was not actually possible to gain entry into the Horseshoe workings by continuing westward from this No. 1 level, the writer was able to carry a survey line sufficiently far to satisfy himself that development has explored this vein thoroughly from either the Lucky Boy workings or from the Horseshoe workings and that all ore of apparent value has been removed from above this horizon in the intervening ground.

The second lowest, or No. 2, level has been driven eastward and westward from the incline. To the east drifting has been carried approximately 230 feet and apparently the vein was not productive of any important amount of ore. Various small raises and box-holes have been driven upward on the vein, but little or



no stoping has been conducted. No scheelite mineralization of importance was noted in this section of the mine. To the westward from the incline the drift was driven 120 feet and apparently developed stoping ground for most of that length. These stops were carried through to the No. 1 level above. At 57 feet from the incline scheelite mineralization is present in remaining pillars and is maintained along the drift to the westward end wall of the stoping which rises above the level at approximately 100 feet from the incline. On this end wall there is a very attractive display of scheelite mineralization across widths of vein which average 27.2 inches for a length of 9 feet. A visual assay of this section indicated 1.84% oxide of tungsten. The scheelite here shows typical tin white fluorescence and occurs in isolations which vary up to approximately 3 square inches in size but the greater part of the scheelite mineralization occurs in much smaller segregations than this.

On the lowest level, No. 3, drifting on the vein was carried for 130 feet to the eastward. As on No. 2 level the work in this direction was apparently disappointing as most of the vein exposed remains unmined. To the west of the incline the drift extends 140 feet and most of the vein between this and No. 2 level has been either explored or mined out by stoping. At 70 feet from the incline scheelite mineralization, similar to that seen on No. 2 level, appears in vein material which remains in place; it recurs in smaller exposures along the drift to the westward and above in pillars in the stoped ground.

As may be seen from the accompanying map these remaining



indications of scheelite mineralization between the second and third levels indicate the presence of a shoot raking downward to the south-east which apparently coincided with the main shoot of sulphide mineralization which was mined. The upward extension of this shoot was located in the Horseshoe workings, as detailed later in this report.

In addition to these exposures of scheelite which appear to fall within the limits of one defined shoot there is another group of exposures close to the intersection of the incline and the No. 3 level. Here well defined isolations of scheelite occur on both walls of the incline for a distance of 32 feet above the No. 3 level. The mineralization is maintained on the No. 3 drift, to the east of the incline for a length of 22 feet. No extension to the west of the incline is shown on the drift. As may be seen from the accompanying plan the indications are that this occurrence is separate from the shoot indicated farther to the west. Careful examination of the No. 2 level east of the incline and the No. 3 level west of the incline provided no evidence of faulting by which the two groups of exposures could be correlated. A visual assay over a length of 32 feet on the west wall of the incline from the No. 3 level upward, across an average width of 18.2 inches, showed a content of 0.41% oxide to tungsten. Another visual assay, taken along the north wall of the No. 3 level east drift, for a distance of 22 feet from the incline and across an average width of 26.3 inches showed a content of 0.94% oxide of tungsten.

Development of the vein below the No. 3 level was apparently discontinued when the operators found that lime rock from the hanging wall side was tending to fill the vein fissure. There appears to be



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no reason why this condition should be maintained if downward development were continued.

The Horseshoe underground workings are accessible by two shafts collared 150 feet and 195 feet due west respectively from the collar of the Lucky Boy incline. These workings are on the Lucky Boy veins far as can be told by Brunton survey. At the present time the two shafts are in very poor condition. Both were driven as inclines down the dip of the vein and most of the ground between them has been removed. The westward one is accessible to a depth of approximately 160 feet and the eastward one to a slightly greater depth. Scheelite mineralization is present in the vein material which remains in both of these shafts. In a short drift, driven to the eastward from the eastward shaft, at a distance of 40 feet from the collar, there is strong scheelite mineralization for a length of 10 feet and over an average width of approximately 2 feet. This exposure is in a small pillar and represents very little tonnage but it does line up to mark the upward extension of the westward shoot of scheelite mineralization indicated in the Lucky Boy workings. In addition there are some large and well defined isolations of scheelite in the surface exposure of the vein between the two Horseshoe shafts and these are further proof of the rake of this shoot.

The Copper Chief workings lie approximately three-quarters of a mile south-westward from the Lucky Boy and Horseshoe showings at an elevation of 5170 feet. The property is located in the Badshot formation of siliceous limestone. Quartz veins in the lime have been explored at four locations by underground workings.



In each case the veins are narrow, flat lying and mineralized in varying degree by the same sulphides as occur in the Lucky Boy vein. The veins strike generally northward and dip flatly to the east.

The main showing, at an elevation of 5170 feet has been exposed underground by a drift driven on a fault which strikes south 27 degrees west and dips at 80 degrees to the north-east. The vein in these workings strikes 25 degrees north-eastward, dips south 20 degrees westerly and has widths which vary from 6 to 18 inches. It is exposed only on the foot-wall side of the faulting up to 45 feet from the portal where it disappears in the floor of the drift. The drift continues on the strike of the vein and it is again exposed in a crosscut which has been driven from the drift for 50 feet at south 85 degrees west, at a point 90 feet from the portal. At 10 feet from the face of this crosscut the main quartz vein intersected; here it has been broken and dragged by the action of the faulting. At 12 feet from the main portal the vein has been stoped upward to the south-westward for a slope length of 24 feet where it comes to the surface. A sample was taken from the east wall of this slope across 16 inches of quartz which contained a little scattered sulphide. This assayed:                      oxide of tungsten.

From the level at the foot of this stoping a branch working follows the vein on a bearing of south 6 degrees west for 18 feet into the right wall of the main drift. At 47 feet from the main portal, on a bearing north 80 degrees west, a second stope has been started from the surface. This extends 14 feet up the dip of the vein on a bearing of south 28 degrees west. A sample was taken from the south easterly wall



of this stope across the vein which here has a width of 8 inches and carries a small amount of sulphide. This sample assayed oxide of tungsten.

In these workings scheelite mineralization is apparently associated with the sulphides which occur within the vein in stringers and lenticular zones which vary in width from 1 to 4 inches. No sulphide mineralization or scheelite occurs in the hanging or foot wall rocks adjacent to the vein.

Three other showings were examined on the Copper Chief ground. Slightly below the main portal a drift has been driven for 10 feet on a quartz vein which has widths of 2 to 3 inches and is apparently barren of sulphides. At 500 feet south of the main portal a drift has been driven for 25 feet on a quartz vein which may possibly be correlated with that in the main drift. Very little sulphide mineralization is present at this exposure. At 600 feet south of the main portal another drift has been run on a narrow quartz vein.

From the four locations at which quartz veins were exposed as described above thirty hand specimens were selected and submitted to the ultra-violet lamp. Of these only six showed the presence of scheelite and these were all from the vein in the main workings. In the six specimens there was only a small amount of scheelite present and it appeared to be associated with the sulphides.



## SUMMARY

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In the Horsehoe and Lucky Boy workings there was apparently a considerable tonnage of scheelite ore in place before the silver-lead shoot was mined. Unfortunately the sulphides and the scheelite appeared to have been deposited within the same sections of the vein and, as a result, much of the ~~scheelite~~ scheelite must have been mined and discarded as waste at the time of mining high grade silver-lead ore would have been cobbled to a high grade; the bulk of the rejected material would either have been discarded underground into empty stopes or onto the surface dumps. The mine is in such poor condition underground that it would probably not be economic to undertake planned recovery of waste in the stopes, but it seems entirely reasonable that there can be a certain production of scheelite from the outside dumps. With this in mind the writer lamped the dumps and found that in certain sections there are indications of considerable scheelite mineralization. It was suggested to the owners that they undertake recovery from this source at once. In addition a few underground locations which could be reached easily and safely should be productive of a small tonnage of scheelite ore; this refers especially to the showing at the foot of the Lucky Boy incline and the small pillar beside the Horsehoe east shaft.

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over →



Any major development to explore for downward extension of the main scheelite shoot below the Lucky Boy No. 3 level would entail considerable capital expenditure for rehabilitation of the workings or for driving new entries. Such expenditure appears inadvisable unless financed by profits derived from scheelite recovered from the outside dumps and accessible underground locations. //



82K/12E *R. J. Macdonald Underclerk*

*7 Nov. 21*

82K/NW-3

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Walker, Bancroft and Gunning. *June 1942*

50-117

by J.S. Stevenson

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Three other showings were examined on the Copper Chief ground. Slightly below the main portal a drift has been driven for 10 feet on a quartz vein which has widths of 2 to 3 inches and is apparently barren of sulphides. At 500 feet south of the main portal a drift has been driven for 25 feet on a quartz vein which may possibly be correlated with that in the main drift. Very little sulphide mineralization is present at this exposure. At 600 feet south of the main portal another drift has been run on a narrow quartz vein.

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## SUMMARY

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Any major development to explore for downward extension of the main scheelite shoot below the Lucky Boy No. 3 level would entail considerable capital expenditure for rehabilitation of the workings or for driving new entries. Such expenditure appears inadvisable unless financed by profits derived from scheelite recovered from the outside dumps and accessible underground locations.



82K/12E  
82K/NW-34

Title..... Lucky Boy and Copper Chief.  
Author..... S.S.H.  
Date and Typist..... Jan.15/53. nb 1.

50° 117° N.W.

Lucky Boy and  
Copper Chief (Major  
Explorations Limited)

Company office, 402 Ford Building,  
193 East Hastings Street,

Vancouver, B.C. R. L. Foster, president. Capital, 3,000,000

shares: no par value. Major Explorations Limited holds

seventeen mineral claims on the north slope of Trout Mountain

and lying due west of the settlement of Trout Lake. Four

recorded claims are held by the company, and six Crown-granted

claims and seven other recorded claims are under option. The

two principal claims are the Lucky Boy, an old Crown-grant,

Lot No.4743, and the Copper Chief, a relocation in 1939 of

ground that was originally held under the same name. These

two as well as other old claims such as the Willow Grouse,

Ruffled Grouse, and Molybdenum are briefly mentioned in

various Annual Reports of the Minister of Mines B.C. between

1898 and 1943.

The various claims were originally located on

narrow, flat-lying quartz veins from which small shipments

PROPERTY FILE



Title Lucky Boy and Copper Chief.  
Author S.S.H.  
Date and Typist Jan.15/53. nb. 2.

of high-grade silver-lead ore were made. The following  
production is officially recorded:

	Date	Tons	Silver oz.	Copper lb.	Lead lb.
Lucky Boy	1903	181	45,788	3,294	93,838
	1904	125	24,659		81,207
	1905	55	7,899		24,205
	1906	23	4,096		8,877
	1912	49	7,358		13,054
Copper Chief	1905	2	423		549
	1917	12	1,513		2,123
Ruffled Grouse	1901	6	917		1,117
	1902	3	529		568

During 1942 and 1943 the Lucky Boy and adjoining claims attracted some attention because of the occurrence of scheelite in the quartz vein on the Lucky Boy and in skarn on the Copper Chief. No scheelite was mined at the Lucky Boy, but in 1942, 23 tons sorted from the old dump and shipped to Ottawa for treatment produced 650 pounds of concentrates



Title..... Lucky Boy and Copper Chief.....  
Author..... S.S.H.....  
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assaying 69 per cent tungstic oxide. No further work was done on the properties until they were taken up by the present company in 1951.

Currently work is concentrated on exploring showings of scheelite-bearing skarn on the Copper Chief. No examination of the Lucky Boy was made at this time and for a description of that property the reader is referred to British Columbia Department of Mines Bulletin No. 10 (Revised) 1943, pages 131-133.

The company established a camp at the old cabins on the Lucky Boy claim. The camp is at an elevation of about 4,200 feet and is reached by 3 miles of road on moderate grade from the head of Trout Lake.

The claims lie mostly to the south of the camp and extend from Wilkie (Trout) Creek, at an elevation of about 3,000 feet, up the southeast side of the valley to the top of the ridge at an elevation of about 6,000 feet. The showings of scheelite-bearing skarn lie on this steep slope



Title..... **Lucky Boy and Copper Chief.**  
Author..... **S.S.H.**  
Date and Typist..... **Jan.15/53 nb 4.**

that from top to bottom averages almost 40 degrees.

The claims are underlain by a succession of quartzites which have one or more interbeds of limestone a few tens of feet thick. The quartzite, originally a grey and rather granular rock, over much of the area is silicified, fine grained, and contains finely disseminated pyrite and pyrrhotite which on weathering produce a variety of rusty brown stains. The stained quartzite in places is hard to distinguish from skarn.

Bedding in the quartzite is very seldom seen, but a steep northeasterly dipping foliation is common and a few small dragfolds were noted.

Grey limestone is interbedded with the quartzite and outcrops in a number of bands to the southwest of the camp. One band outcrops a few hundred feet southwest of the camp and lies on the hangingwall and southwest side of the Lucky Boy vein. Its full extent along strike to the northwest or southeast is not known. About 600 feet farther southwest



Title..... **Luch Boy and Copper Chief.**  
Author..... **SSH**  
Date and Typist..... **Jan.15/53. nb. 5.**

on the Copper Chief another band of limestone, now very largely altered to skarn is exposed through a vertical range of several hundred feet and may extend considerably farther along strike to northwest and southeast, although definite continuity between skarn outcrops has not been established. The old Copper Chief main adit and other workings are in this skarn. Two other limestone bands lie southwest of the Copper Chief skarn band and not more than 500 to 600 feet across strike from it; the first is largely altered to skarn, and the one farthest southwest, has skarn along its northeast contact. Several other limestone bands outcrop on the top of the ridge leading southward to Trout Mountain. Along strike, bands of grey limestone are seen outcropping in prominent bluffs on the northwest side of Trout Creek. On the map accompanying Memoir 161 of the Geological Survey of Canada, the quartzite is mapped as part of the Lardeau series and the limestone is correlated with the Badshot limestone.



Title..... Luc' Boy and Copper Chief.  
Author..... SSH  
Date and Typist..... Jan. 15, '53. nb. 6.

In some exposures the alteration of limestone to skarn is complete, and in others a small lens of unreplaced limestone may be completely surrounded by skarn. In the southwestern limestone band a 25-foot width of skarn is developed along the northeastern side of the limestone which is locally thickened along the crest of an anticlinal fold.

The skarn varies somewhat in appearance, though in all places it is composed <sup>mostly</sup> of diopside, <sup>epidote</sup> tremolite, and light brown garnet. Skarn in the lowest showing consists very largely of <sup>calcite</sup> tremolite and light brown garnet and is very light in colour. A common variety is extremely dark coloured from <sup>and epidote</sup> having a high percentage of diopside, and little or no garnet. It is commonly heavily mineralized with pyrrhotite. Such rock constitutes the skarn band at the Copper Chief adit and at one time\* was described as a "bedded vein of pyrrhotite."

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\* Minister of Mines, P.C., Ann. Rept. 1914, p. 316

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Author..... SSH  
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Other old reports refer to a diorite dyke which cuts across the formation and along which some molybdenite was found. It is possible that the skarn was mistakenly called diorite, because no dyke is known on the property.

No intrusives were seen on the claims and the contact of the Kuskanax batholith lies several miles to the south. The alteration of limestone to skarn does not appear to be related to the exposed contact of any known intrusive.

The strike of the beds across the claims is rather uniformly about north 30 degrees west. Bedding within the quartzite is obscure, but it and most limestone or skarn contacts dip from 65 degrees to very steeply northeast. In several places small dragfolds plunging 20 to 30 degrees northwest were seen. At the lowest known showing the skarn occupies the crest of an anticlinal dragfold plunging 20 degrees northwest.

The form of the dragfolds and the parallelism

Title..... Lucy Boy and Copper Chief.  
Author..... SSH  
Date and Typist..... Jan. 15/53. nb. 8.

of bedding and foliation are interpreted as meaning that the rocks are involved in close repetitive isoclinal folds whose axes plunge 20 to 30 degrees northwest. This kind of folding combined with gentle northwesterly plunging fold axes seems typical of the area which extends 15 miles across strike to the head of Gainer Creek.

The skarn is mineralized with pyrrhotite in varying amounts and with rather fine-grained scheelite. As a consequence of its fine grain the scheelite is almost impossible to detect by unaided eye, and the use of an ultra-violet lamp is necessary. Although molybdenite has been reported none was seen nor detected by assay.

The known skarn occurrences all are on the southeast side of Trout Creek. The lowest exposure is at an elevation of 3,570 feet, about 500 feet above the creek, and the highest showing, at a short adit just below the top of the ridge, is at 5,350 feet. At the time of examination,



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sixteen different skarn occurrences were known. They appear to lie along three parallel lines, but a survey of the exposures is necessary and continuity between them should be established. A possible interpretation is that all the exposures are outcrops of a single limestone bed that was rather intricately folded before being altered to skarn.

Five exposures of skarn lie on the southwest side of a steep gulley that extends from the old Copper Chief adit at elevation 4,830 feet down to creek level. The lowest showing, elevation 3,570 feet, is about 500 feet below an old low-level trail that leads southwest from the old Lucky Boy camp along the side of Trout Creek. The skarn is rather light coloured and is composed mainly of <sup>calcite</sup>~~trancite~~ with small amounts of garnet and diopside. It occurs on the northeast side of, and close to the top of, a band of grey limestone that extends uphill from the creek. The skarn is about 8 feet wide and is moderately well mineralized with scheelite. The skarn lies below an anticlinal fold of quartzite whose axis plunges 20

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degrees northwest. As a consequence the extension of the skarn uphill from this point does not appear in the gulley and must lie on the southwest side covered by overburden.

The four other exposures of skarn are close to the point where a high-level trail from the Lucky Boy camp to the Copper Chief adit crosses the same gulley at an elevation of 4,735 feet. In one exposure below the trail at elevation 4,620 feet, dark coloured skarn is 11 feet wide and, although well mineralized with pyrrhotite, contains little scheelite. At elevation, 4,750 feet on the southwest side of the gulley the skarn band is 52 feet wide. It is dark coloured because of the high proportion of *and epidote* diopside and near its northeast side encloses a narrow lens of grey limestone. Scheelite is sparingly disseminated throughout the skarn and a 12-foot width near the limestone lens displays a moderate amount of scheelite mineralization. At an open-cut at elevation 4,820 feet the band is cut by a few narrow quartz stringers and the otherwise granular dark skarn is silicified. The skarn band is about 20 feet wide and contains finely disseminated scheelite, but near the quartz stringers the rock is well mineralized with scheelite across a width of about 5 feet.

At the portal of the Copper Chief adit at elevation 4,840 feet, the skarn is 2 to 4 feet wide and encloses several lenses of grey unaltered limestone. Both skarn and limestone are mineralized with scheelite and a sample across 4 feet assayed 1.06 per cent tungstic oxide. Several hundred feet of underground work was done at the Copper Chief adit which was driven



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on a narrow quartz vein dipping 10 degrees northeast. Under-  
ground the vein is cut off by a strong fault striking north 30  
degrees west and dipping 65 degrees northeast, and most of the  
underground work was in search of the faulted segment of the  
vein. The fault cuts off the skarn band whose extension on the  
east side of the fault is not visible. The Copper Chief quartz  
vein and other narrow, flat-lying veins nearby are rather sparsely  
mineralized with scheelite. These four skarn occurrences are  
believed to be exposures of a single band extending through a  
vertical range of 220 feet.

Uphill from the Copper Chief adit at elevation 5,250  
feet, an isolated exposure of dark coloured skarn is well mine-  
ralized with finely disseminated scheelite. A sample taken  
across a 4-foot width assayed 1.18 per cent tungstic oxide.

Part way uphill and across strike to the southwest is  
the highest of the main showings at elevation 5,350 feet. The  
skarn is 2.5 feet wide where it is crossed by an old adit 18  
feet long. The skarn is dark, <sup>quartzose,</sup> heavily mineralized with pyrrho-  
tite, and well mineralized with finely disseminated scheelite.  
Two samples taken on the north wall of the adit across widths  
of 4 and 4.1 feet assayed 1.62 and 1.02 per cent tungstic oxide  
respectively. Geological conditions around the showing are  
obscure and its relation to the other showings is not immediately  
apparent.

Southwest of this first line of showings are three  
exposures that appear to be aligned. In one the skarn is 18

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feet wide and a sample across a 12-foot width, taken by Hedley in 1942, assayed 0.94 per cent tungstic oxide. The two other showings contain moderate amounts of disseminated scheelite across widths of 6 feet.

Farther to the southwest are three more skarn exposures which may be aligned. The skarn in one is 25 feet wide and lies on the northeast side of a considerable thickness of limestone. The true thickness of the limestone bed is obscured by flowage and intricate folding in the axial region of an anticline. Scheelite is disseminated through the skarn near the intersection of a narrow quartz vein.

In August, 1942, the showings were sampled by an examining engineer. The arithmetical average of ten samples taken by him at various showings is 0.78 per cent tungstic oxide, but much additional exploratory work remains to be done. Present information indicates that much of the skarn is mineralized with scheelite and that the scheelite mineralization is not related in amount to the intensity of the pyrrhotite mineralization. The presence of scheelite in the narrow, flat quartz veins, as well as in skarn which is cut by quartz veins suggests a possible concentration of scheelite in the vicinity of quartz veins.

References: Geol. Surv., Canada, Ann. Rept. 1913, Pt. A, pp. 71-72; Vol. 141, pp. 63-64; U.S. Dept. of Mines, Bull. No. 10, Revised, p. 131. Also references to Lucky Boy, Copper Chief, Polydemon, Ruffled Grouse and Willow Grouse in annual Reports of Minister of Mines, U.S. 1898, to 1943.

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VICTOR DOLMAGE  
Consulting Geologist  
1318 Marine Building  
Vancouver, B. C.  
Zone 1.

PROPERTY FILE

August 28, 1952.

MAJOR EXPLORATION

LUCKY BOY & ADJOINING

TUNGSTEN MINERAL CLAIMS, TROUT LAKE, B.C.

Major Exploration hold, by option, by location and otherwise, 17 mineral claims and fractions situated on Trout Mountain, a few miles northwest of Trout Lake, in the Revelstoke mining division of British Columbia.

From two of these claims, the Lucky Boy and Copper Chief, small tonnages of lead-zinc ore were mined many years ago and some tungsten ore was sorted and shipped in 1943-46 from the old dump of the Lucky Boy property. The claims are now under investigation as a possible source of tungsten, which is present in the form of scheelite. Both old properties are described in Bulletin 10 of the B. C. Department of Mines, revised by S.S. Holland and published in 1943. The Lucky Boy is described also by R. W. Brock in the Annual Report of the Canadian Geological Survey for 1903.

Besides the old Lucky Boy and Copper Chief mines, there are 14 other showings on the property, extending from elevation 3600 up to 5360 feet above sea level. All the showings, including the old mines, were examined and 13 samples were taken.

PROPERTY FILE

The Lucky Boy camp is used as a base from which the other showings are reached by trails. The Lucky Boy camp is at elevation 4295, and is reached from the village of Trout Lake by an old road which was used to ship ore in former times. The road follows a good grade and, while too narrow for modern vehicles, it could easily be widened and converted into a suitable truck road. From this camp to the other showings only narrow foot trails exist which are built over steep rocky slopes where road construction would be difficult and expensive.

#### GEOLOGY

The mountains west of Trout Lake are composed of schists, quartzite, phyllites and limestone beds folded steeply so that the formations stand nearly vertically and strike north 40 to 65 degrees west. Several limestone beds are known and others not yet discovered probably exist. All the mineral deposits appear to be in or near the contacts of the limestone members.

There are two types of mineral deposits on the properties in question. One type consists of nearly flat quartz veins which cut the steep dipping limestones and quartzites at nearly right angles. They carry galena, zincblende, tetrahedrite and scheelite as scattered bunches in the quartz. The Lucky Boy and Copper Chief deposits are of this type. The other type consists of garnetized and silicified limestone



and is confined to the limestone bands, usually near their contacts. They strike parallel to the formations which strike northwesterly and dip steeply to the southwest. Besides garnet they contain pyroxene and pyrrhotite and considerable scheelite, but little or no galena or tetrahedrite and only minute amounts of zincblende. They vary in width from three or four up to 40 feet, but none has yet been proven to extend more than a few feet or a few tens of feet in length.

The deposits are scattered over an exceedingly rugged and steep mountains side and their positions relative to one another and to the limestone bands in which they occur have not yet been accurately determined. This can be done only by a difficult transit survey. However, a rough idea of their relative positions is shown on the accompanying sketch made by Mr. Vear.

The amount of tungsten contained by the various showings is indicated by the 13 samples taken and their assay values as shown on the sketch. These samples were taken systematically but each was taken across the best part of its showing.

The old workings of the Lucky Boy and Copper Chief mines still contain remnants of ore which contain little lead and zinc but are quite rich in scheelite. These remnants amount to only a few hundred tons and, because of the condition of the old workings, they would be difficult and expensive to extract. Nevertheless, they contain the richest tungsten ore

Major Exploration.

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on the property.

Altogether the samples show that scheelite is present in a great many showings in important amounts and indicate a fair possibility of finding commercial deposits of tungsten. Future exploration should be aimed at increasing the known size of the more promising showings rather than at finding more showings.

This should be done by first, diamond drilling, and then, if the drilling results warrant it, by driving adits in the steep mountain sides. Because it is the lowest showing and because it is within reach of a water supply, the number 1 showing should be drilled first. After this, the showings in the vicinity of the "water hole" near the old cabin should be attacked in such a way as to prove a connection between the showings at and near this level and the number 1 showing, as well as the higher showings.

While the drilling is in progress and before it has been advanced too far, it will be necessary to make a survey of the showings and of the holes already drilled and those to be drilled.

Before this work can be carried out expeditiously, it will be necessary to enlarge the road up to the Lucky Boy camp, to repair the two buildings now in use there, and add a new building. Also the trails to the drill sites will have



Victor Dolmage

Major Exploration.

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to be enlarged and improved.

This work will require an expenditure in the neighborhood of \$20,000.00, but this is justified by the possibilities indicated by the many showings and their tungsten values.

Respectfully submitted,

"V. Dolmage"

S E A L

Professional Engineer  
Province of British Columbia,  
VICTOR DOLMAGE  
Geological Engineer.

Signature certified,

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C. L. Arnold,  
Director,  
Major Exploration