

S U M M A R Y

AZURE RIVER GROUP

NAME Azure River Group.

PROPERTY Thirteen claims and two fractional claims, with probably additional fractional claims to be located as a result of surveys.

TITLE Claims held by location and annual assessment work. Fifteen are being surveyed preparatory to Crown Granting.

LOCATION In the Clearwater District, Kamloops Mining Division of British Columbia.

ACCESS At present by trail from Gosnell on the Canadian National Railway, about 160 miles north of Kamloops. Distance by trail 46 miles. Alternative routes as outlined in text.

TOPOGRAPHY Generally rugged country. Altitude at the property 5400' to 6400'. Spruce and cedar at lower altitudes, balsam near property. The climate is similar to that at Barkerville. Considerable snow and clod spells in winter, but year round operations possible.

POWER Several small part-time streams in the immediate neighborhood, especially Azure River. Streams need study before being developed. Diesel power indicated in early stages.

EQUIPMENT Small tools and two small cabins, sufficient room in cabins for eight or ten men.

GENERAL GEOLOGY Area underlain by Pre-Cambrian schists, on the property represented by sericite and quartz sericite schists with general northwest southeast strike.

MINERALIZATION Many quartz veins occur within the schists, some cutting the schistosity, others "lying with" the schist. Quartz veins vary in thickness from mere threads to twenty-five or more feet. Some of the quartz carries pyrite, a little galena and occasionally chalcopyrite. When sulphides are present, the quartz-sulphine vein matter is, probably without exception, gold bearing and pyrite mineralization is widespread.

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DEVELOPMENT

Numerous shallow trenches and open cuts. Two tunnels, 55 feet (Horne) and 40 feet (Stewart) long. Horne Tunnel partially develops a body of quartz-pyrite. Part of it shows good gold values, part low grade. This body is worth more work. Stewart Tunnel is in practically barren schist, but if continued should encounter large quartz vein showing on surface. Continuation being driven and warranted.

CONCLUSION

Pyritic quartz and enclosing altered schist extensively mineralized indicating substantial volume of better than average grade ore. Further surface and sub-surface prospecting warranted and diamond drilling to medium depth indicated. Indicated volume of ore and apparent continuity of value presage conditions warranting major mining development and milling operation.

(SIGNED) NED. E. NELSON.

AZURE RIVER GROUP

PROPERTY:

The Azure River Group consists of thirteen recorded claims and two recorded fractional claims. At the time of examination the claims were being surveyed by Mr. Harold Garden of Morkill & Garden, Provincial Land Surveyors, and it was expected that other fractional claims would be necessary to cover all the wanted ground.

The recorded claims and fractional claims as of the time of examination were:-

Summit Nos. 2, 3, 4, and the Buzzard, parts of the original Summit Group.
Oldham, Oldham Nos. 1, 2, 3, 4, 5, 6, 11, 12 and Renfrew.
Fractionals Nos. 1 & 2, parts of the Oldham Group.

The compact block should exceed 700 acres in area. (A full claim covers 51.65 acres.)

TITLE:

As of the time of examination, the claims were held by staking and yearly assessment work. All claims and fractions, according to the affidavit of the Deputy Mining Recorder at Kamloops, were in "good standing".

LOCATION:

The Azure River Group is located in the Clearwater Section of the Kamloops Mining Division of British Columbia, Canada. The property lies to the west of the Azure River on the slope and in the summit saddle between that river and Hobson Creek on the west.

ACCESS:

The Azure River-Hobson Creek Summit area is reached by pack horse trail from Gosnell, a tank station on the Canadian National Railway and the North Thompson River, about 160 miles north of Kamloops, B.C. Kamloops is about 250 miles from Vancouver, B.C.

The pack trail follows the valley of the North Thompson River westerly for about 30 miles, then climbs the divide (altitude 5300') above Azure River. The trail then leads down Summit Creek to the Azure, 8 miles, and up the Azure River for five miles, at which place it crosses the Azure and climbs to the property on the Azure-Hobson divide. The total distance is 46 miles.

The trail is in poor condition and should be reconditioned if same is used prior to the development of one of the other means of ingress.

An undeveloped route, which seems to offer the most advantages, leads from Williams Lake on the Pacific Great Eastern Railway. This route makes use of the present fair auto road to Likely, on Quesnel Lake, 60 miles from Williams Lake. Then by water to the head of the Lake, 70 miles, follows 5 miles across the low divide between Quesnel and Hobson Lakes. Again water to the head of Hobson Lake, five or six miles. Then by trail or road to the Hobson Azure Divide, 14 miles. At present several truck lines operate directly from Vancouver, B.C. to Williams Lake and the Cariboo districts.

Of this route, that part of the head of Quesnel Lake is in use. Between Quesnel and Hobson Lakes is a road of sorts. On Hobson Lake a motor boat would be required. From the Head of Hobson Lake a road four miles long was once built to a placer camp, long since abandoned. From that point to the property on the Divide, 10 miles, a new trail and road would be necessary. Mr. Angus Davis, former Resident Engineer for the Province of British Columbia, stated that he has been over this route and that it presents no serious difficulties for improvement.

This route is the longest from points on the railway, but, using trucks and boats, supplies could now be landed within twenty-five miles of the property. Fifteen miles of the twenty-five are partially developed, and the remainder, compared to the other routes should be overcome with little trouble and expense.

A fourth possible route is via the Clearwater River road, 25 miles long, and a trail 20 miles to the Clearwater Lake. Thence over that Lake to where Hobson Creek enters. Then by trail or road to Hobson Lake, six miles. By water to the head of the Lake, from which point there remains the 14 miles of Route #3.

TOPOGRAPHY, TIMBER & CLIMATE:

The Hobson-Azure summit is about 6400 feet above sea level. The pass is essentially level for about a mile, and the slopes to the east (Azure) and west (Hobson) are, relatively, gentle. The mountains to the north and south rise perhaps 10,000 feet higher than the pass.

Timber line is at about 5800 feet, though scrub balsam occurs above that elevation. The valleys are well timbered with balsam. While not a first class structural timber, it should satisfy many needs around a mine and camp.

The climate is not, preparations being adequate, unfavourable for year around work. The snowfall is heavy and cold snaps may hinder, but not halt, winter work. The waterways, Quesnel and Hobson Lakes, freeze over and at freeze-up and break-up seasons would be practically impassable, but otherwise no great trouble should be encountered; the length of freeze-up and break-up seasons should not exceed 30 days in each case.

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Occasional tie-ups might be expected in road haulage, due to snowfall and the spring break-up. In a general way, operating conditions would be similar to those at Barkerville, now a thriving mining camp nearly 60 miles from the railway at Quesnel.

POWER:

Several streams within ten miles of the mines are indicated as possible power streams, but so far as known, none have been studied thoroughly. At certain periods they carry much water, and the frequent rapids and small falls suggest water power possibilities, but what the year around dependable runoff may be is probably unknown, and requires investigation.

The stream flowing from Murtle Lake, sixty or more miles from the property, is generally recognized as a source of dependable and economically developed water power. This power development would be more or less on the Clearwater Lake (No.4) route and on that account makes that possible approach interesting.

Until the waterpower possibilities have been investigated, Diesel power would suffice, the cost of that type of power not being prohibitive when truck and water haul are possible.

EQUIPMENT:

This property is adequately equipped for the usual hand prospecting and development work. The camp has adequate housing for approximately ten men, and also has the necessary hand tools, blacksmith equipment and other things necessary for this type of operation.

GENERAL GEOLOGY:

The Clearwater area has been studied by Marshall and Davis of the Dominion Geological Survey, their reports being contained in the Survey Reports, Part A for 1928 and 1929 respectively.

The area is underlain by a series of Pre-Cambrian rocks, schists of various types being the most common rocks, though relatively thin beds of limestone are known. The general trend of the schistosity and the bedding is from southeast to northwest. Regional study has shown anticlinal and synclinal structures, but in the area investigated the variations from the general structure are not marked. Changes in strike and dip are frequent, but folds are very scarce. Closer study and development may indicate a close relationship between the variations from the general trend and the many depositions of gold bearing pyrite, but as yet the relationship is not apparent. No signs of post schist igneous activity, other than the quartz and pyrite deposits, were noted in the area studied. Davis notes a granitic sill crossing Hobson Lake near the northerly end, and large masses of granite are found near Murtle Lake to the south of the property. No dykes have been uncovered, nor were any seen when travelling on foot from Gosnell to the claims. The indications are,

then, that the granite, a possible source of the siliceous and metallic mineralizations, is a considerable distance below the present surface.

LOCAL GEOLOGY:

Generally thinly foliated sericite schists underlay the northeasterly part of the ground included in the Azure River Group claims. Those rocks predominate at the Horne Tunnel and northwesterly through the more northerly Oldham Claims. To the southwest thickly bedded brown spotted quartz sericite schist predominates. Locally this is called "Quartzite".

MINERALIZATION:

Both the sericite schist and the "quartzite" have been intensely mineralized by quartz veinlets, veins and masses, sometimes cutting the foliation of the schist at various angles, again following the foliation.

In many cases, the quartz is accompanied by pyrite, occasionally by galena and in the odd case, by some copper mineral, probably chalcopyrite. Wherever tested, the pyrite proved to be gold bearing, and it is believed that throughout the examined area, the pyrite is a sure indication of mineralization by gold.

For the purpose of clarity and in order to make comparison with other reports, I shall discuss the property as divided into two sections, namely the Western and Central section, in which the Stewart Tunnel is located, and the Eastern section, in which the Horne Tunnel is located, in that order.

WESTERN & CENTRAL

In the band of sericite schist, which crosses the mountain in a generally northwesterly direction, no showings of consequence were noted between the Eastern section and the No.4 Oldham claim. There has been but a small amount of work done in the Central area, probably due to the fact that though the surface appearance is impressive, the values have been higher in the Eastern section.

Rising out of the north slope of the pass is a large quartz vein, impressive in width and length. The natural surface is dead white in color and shows little pitting due to oxidation. Immediately under the surface the color is white with brownish patches. The brownish color results from alteration of iron carbonate (siderite) and possible anchorite. Very little pyrite is to be seen. The vein as at the outcrop is in places up to twenty-five feet wide and will probably average over fifteen feet. It is broken into three sections (by faulting) or the separate bodies may be on echelon lenses. The highest and most northwesterly lense splits and makes two branches, each twenty or more feet in width. The total length of the out-

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cropping lenses or faulted blocks is 600 feet. To the southeast the quartz disappears under the wash, and may continue some distance, but does not definitely reappear on the south slope of the pass. To the northwest, the quartz outcrop ends abruptly and is not known to show again, though quartz outcrops more or less in line are reported.

The general trend of the quartz ledge is S.30 degrees E. The dip appears to be about 60 degrees to the east. The enclosing schist varies in dip and strike, but the general trend is S.70 degrees east to east and west, so the quartz vein cuts across the schistosity. The dip of the schist is at a high angle to the north.

The outcropping quartz "comb" has been broken into in two or three places and more or less fresh surfaces thereby exposed, Chip samples were taken at four different places. One of them S.4 assayed: Au. Oz. 0.12, Ag. Oz. 0.14. This sample was taken across 16 feet, and the westerly or footwall was not definitely exposed. Another sample, S.5, was taken of what appeared to be the best six feet for the 16 feet at the west side of the exposure. It assayed:--

Au. Oz.	Ag. Oz.
<u>0.04</u>	<u>0.04</u>

The other samples of the outcropping quartz S.6, S.7, S.8 and S.9 failed to show interesting values.

At a point on a small stream, which flows along the westerly side of the outcrop and cuts across the crotch of the "Y" formed by the splitting of the ledge into two branches, the Stewart Tunnel has been driven into the easterly wall. Schist fills the angle between the two branches and the 40 foot adit is entirely in this schist. The inner end shows considerably more quartz but not yet reached the massive quartz that would be expected from the outcrop above. The schist in the adit is cut by many small quartz veinlets and carries considerable cube pyrite, cubes with 1/8" sides having been noted.

The schist was moll sampled and showed .01 oz. gold. Values have been reported as coming from samples taken in this adit, but this sampling is not confirmative.

Above the adit portal, perhaps 30 feet, in the steep slope, a quartz vein up to twelve inches wide shows cutting the schist. It carries considerable pyrite in spots. Its length has not been definitely determined, but it does not show for over thirty feet. A sample of selected pyrite bearing quartz assayed:

Au. Oz.	Ag. Oz.
2.20	7.8

"QUARTZITE" VEIN:

West of the Stewart Tunnel and on the Oldham No.3 Claim is a large irregular outcrop of quartz in quartz sericite schist, locally quartzite. While most of the quartz is barren of sulphides, as shown by the surface stripping, there are spots showing both pyrite and galena. The quartzose zone is at least 80 feet long in a general north-south direction, and 15 feet wide. Unless the proportion of sulphides increases with the depth, the area is uninteresting, as selected pyrite-galena bearing quartz assayed only:

<u>No.</u>	<u>Au. oz.</u>	<u>Ag. Oz.</u>	<u>%</u>
S.15	\$5.60 0.16	2.9	9.1

A sample from the face of a cut at the south end at the break-over into a dry gulch, chipped across 6 feet, assayed:

<u>No.</u>	<u>Au. oz.</u>	<u>Ag. oz.</u>
S.10	0.04	0.08

The "Quartzite" schist extends up the side of the mountain on the Oldham and Oldham No.1 claims. Literally hundreds of quartz veins varying in size from minute veinlets to silicified zones 15 feet wide (as above noted) cut this schist. Some of the quartz is pyrite bearing and occasionally galena shows, but in general it is barren of sulphides.

On the Oldham No.1 claim, a fairly clean-cut vein, called the "True Fissure" vein, is exposed and has two open cuts in it. The lower is at the intersection of two sets of narrow veins, none of which appears important. The upper cut shows a better defined vein up to 3 feet wide, carrying some pyrite.

A chip sample taken here assayed:

<u>No.</u>	<u>Au. oz</u>	<u>Ag. oz.</u>
S.11	0.01	0.08

From the amount of pyrite exposed here, this sample should have assayed better, judging from other samples showing pyrite.

In order to determine the general tendency of the quartz and "Quartzite" to carry values, samples were taken from many small veins, sometimes pyritic, sometimes not, and from the "Quartzite" itself where exposed for several hundred feet along bluffs on the Oldham claim.

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The sample of quartz veinlets assayed:

No.	Au. oz.	Ag. oz.
S.16	0.03	0.70

The "Quartzite" assayed:

No.	Au. oz.	Ag. oz.
S.17	0.02	0.08 as S.10
S.18	Tr.	0.08 Along face of bluff.

West of the "Quartzite" showings, and overlooking upper Robson Creek from the South, is a patch of huge boulders of quartz, broken down from what must be a great mass of quartz. Little or no sulphide shows, but the quartz carries some siderite which weathers to a brownish tinge. A sample was taken of the material carrying siderite, which showed on assay:

Aug. oz.	Ag. oz.
0.005	0.10

On the Oldham No.4 claim is a knoll called Galena Hill. On the westerly and northerly slopes of it, two exposures of quartz have been open-cutted. The one on the south slope is about 6 x 8 feet, and seems to have no horizontal extensions. The quartz shows little or no sulphide and is not pitted by oxidation.

The showing on the northerly slope is more defined, showing 18" to 2 feet wide for 25 feet, striking with the schist at S.75 degrees east. Some galena and considerable pyrite can be picked here.

A selected sample assayed:

No.	Au. oz.	Ag. oz.	Pb %
S.20	0.24	12.5	24.3

No work of importance, with the exception of the Big Ledge or Stewart Tunnel, has been done in this area. The Big Ledge is impressive, although sampling did not come up to expectations, but if the adit now being driven ahead to crosscut the expected downward extension of the exposed quartz carries pyrite, the outlook is promising.

HORNE TUNNEL OR EASTERN SECTION:

The Horne Tunnel was driven to prospect one of the first found masses of pyrite bearing quartz. The tunnel, then in 26 feet was the principal showing seen by Morrison on the Summit Group in 1928.

An outcropping knob of pyrite-bearing quartz has been prospected by the Horne Tunnel, driven North 27 degrees Easterly and roughly cross-cutting a well-mineralized zone of altered schist and quartz-pyrite. The floor of this tunnel is about 40 feet below the apex of the quartz outcrop.

Mineralization occurs throughout a body of altered schist having a general strike of South 55 to 65 degrees east, dipping to the north-east 65 to 75 degrees. This zone is upward of 50 feet wide, as shown by the Horne Tunnel. For 41 feet the Horne Tunnel crosscuts the formation slightly diagonally, from whence it swings to the left and cuts diagonally across an additional 6 or 7 feet or "strata", well mineralized with quartz and pyrite on the right hand side, blending into altered schist on the left. The schist appears to be the host of the pyrite quartz, most prominent about the nose of a wedge-shaped mass of schist. (See sketch).

Channel samples moiled along the right hand wall of the adit revealed substantial mineralization but indifferent values for the first 32 feet. However, the entire 50 feet showed assayed values of \$10.97 per ton, out of which 18 feet of heavy sulphides assayed \$24.24. (Since the above mentioned work, part cuts the formation diagonally, the true thickness of this zone cannot be known until further development discloses the true thickness of this mineralized zone, but a width of approximately 50 feet is indicated).

On the surface, the northwesterly end of the quartz outcrop is only about 20 feet northwest of a vertical plane on the adit axis. To the southeast a deep trench is said to have not, and probably did not, reach bedrock, and no estimate can be made as to the southeasterly extension.

Certainly the southeasterly side of the adit is more highly pyritized than the northwesterly, but until more work is done, a clearcut idea of the importance of this showing cannot be had. The body appears stronger, as for width, where cut in the adit than as naturally exposed only 10 feet above, and further work is warranted.

Up the slope of the mountain to the northwest are several outcrops of quartz that have not been prospected. From outward appearances, they are not pyrite bearing, though this has not been definitely determined. Several hundred feet northwest of the Horne adit and 250 to 350 feet above it, is a series of quartz outcrops occurring in an area roughly 350 x 100 feet, the northwesterly end being near the No.1 post of the No.2 Summit claim. Except for the pinnacle of quartz near the post and the mass at the southwest end containing a narrow pyrite vein, the quartz is in veins which cross the schistosity. The "pinnacle" is irregular in shape but in general lies "with" the schistosity. It has been broken into and shows considerable pyrite. A sample across the freshened surface, eight feet wide showing considerable pyrite, a little galena and very little chalcopyrite, assayed:-

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Au. Oz.	Ag. Oz.
0.47	0.82

This sample was chipped and contained some oxidized material.

Fifty feet southeast on the supposed strike, a trench shows only 12 inches of quartz and no pyrite. To the northwest the mass ends suddenly against the ends of the schistose "beds". In general appearance, though on a smaller scale, this pinnacle resembles the outcrop above the Horne adit. Whether it is the exposed part of a large mass remains to be proven.

The other quartz veins and masses in the area to the southwest of the "pinnacle" show little pyrite at the surface end in general have been but little broken into. However two "spot" samples taken showing pyrite carried important amounts of gold. One was from the pyrite vein cutting the large mass of quartz. The vein, about ten feet long and up to 12 inches wide, is practically unaltered at the surface. The surrounding quartz shows little pyrite. (See S.3 and S.21)

This zone of quartz mineralization deserves more work, especially at moderate depth, 25-50 feet, to determine the absence or presence of enough gold-bearing pyrite to make it of interest.

About 100 feet northeast of the "pinnacle" is a zone of silicified schist up to 15 feet wide, and at least 150 feet long. No pyrite shows.

CONCLUSION:

Due to the wide distribution of gold bearing pyrite, the area encompassed by the Azure River Group is distinctly promising. The Summit group, on which the Horne Tunnel is located, with its various outcrops of quartz and pyrite, is particularly interesting and should be further developed. The surface showing indicates a zone in which may be developed enough of the pyrite-quartz masses to become a producer of medium grade commercial ore. I believe these possibilities warrant thorough prospecting to medium depths by diamond drilling. If the results of such a program verify the present surface indications and sub-surface developments, this portion of the property alone would warrant a commercial development program similar to that set out in the budget and schedule of Mr. Lee, deceased. In the central area, in the vicinity of the Stewart Tunnel, are impressive surface indications and I would recommend a further diamond drilling program which, should it disclose the values found in some surface samples, would develop a large tonnage of good grade commercial ore.

Without reservation, I recommend the appropriation of a sufficient sum to prosecute development of the Azure River Group of Claims.

(Signed) NED. E. NELSON

Report of N.E. Nelson, B.Sc., E.M.
October, 1936.

File No.9842-79.

CERTIFICATE OF ASSAY
G. S. ELDRIDGE & CO.

Provincial Assayers, Analytical & Consulting Chemists,
Metallurgical & Cement Inspectors.

WE HEREBY CERTIFY that the following are the results of assays made by us upon samples of ore received from NED. E. NELSON, B.Sc. E.M. on behalf of Messrs. Western Investments Ltd., September 24th, 1936.

MARKED	GOLD		SILVER		Total	LOCATION.	
	Ounces	Value	Ounces	Value	Value		
	Per ton	per ton	per ton	per ton	per ton		
Azure River Group #1	1.52	\$53.20	0.66	0.30	\$53.50	1. Horne Tunnel	
Sampling done by						4½ at turn to left	
Ned. E.Nelson	2	0.75	26.25	0.26	0.12	26.37	2. Horne Tunnel
M.E.(Canada)						6' back from	
B.Sc. (USA)						turn 12' wide.	
(Accompanying	3	1.18	41.30	0.56	0.25	41.55	3. H.Tunnel 1½'
his report of						back from #2	
Oct.14th,1936)	4	0.06	2.10	0.16	0.07	2.17	4. H.Tunnel 8½'
						back from #3.	
	5	0.02	0.70	0.08	0.04	0.74	5. H.Tunnel 7½'
						back from #4.	
	6	0.32	11.20	0.40	0.18	11.38	6. H.Tunnel 4'
						back from #5.	
	7	0.08	2.80	0.40	0.18	2.98	7. H.Tunnel 5'
						back from #6.	
	8	0.01	0.35	0.14	0.06	0.41	8. H.Tunnel 5'
						back from #7	
						Schist.	
	9	1.01	35.35	3.1	1.40	36.75	9. H.Tunnel about
						same as #1 after	
						shot put in.	
	10	0.22	7.70	1.6	0.72	8.42	10. H.Tunnel from 9
						going in about	
						6' thickness.	
	11	0.28	9.80	1.4	0.63	10.43	11. H.Tunnel 2½'
						pyrite at port-	
						al, right side	
						going in.	
	12	0.01	0.35	0.10	0.05	0.40	12. From face up on
						Oldham Cln F.l.	
						Started byStewar	
	15	0.01	0.35	0.14	0.06	0.41	15. 0-10' Stewart t
						Tunnel Schist	
	16	0.005	0.18	0.08	0.04	0.22	16. 10-20' Stewart
						Tunnel Schist	
	17	0.01	0.35	Trace	---	0.35	17. 20-30' Stewart
						Tunnel Schist	
						more Quartz	
	18	0.01	0.35	0.18	0.08	0.43	30-36' Stewart
						Tunnel Schist	
						considerable Qt.	
	19	0.01	0.35	0.06	0.03	0.38	36-39' Stewart
						Tunnel Schist &	
						Quartz.	
	S21	1.64	57.40	4.2	1.89	59.29	Pit 200' N.40 W
							of old forge.

Gold calculated at \$35.00 per ounce.
Silver calculated at 45¢ per ounce.

G.S.ELDRIDGE,
Provincial Assayer.
(Seal)

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MARKED		GOLD		SILVER		LEAD		TOTAL VALUE	
		Ounces per ton	Value P.ton	Ounces per ton	Value P.ton	Per Cent	Value P.ton		
Azure River Group Sampling done by Ned.E. Nelson M.E.(Canada) B.Sc.(USA) Accompanying his report of October 14, 1936	S1	0.47	\$16.45	0.82	0.37			\$16.82	Quartz outcrop at 2 Summit Post, Post 8' width "Pinnacle"
	S2	0.06	2.10	0.30	0.14			2.24	Quartz in trench 50' S.E. of where S.1. taken.
	S3	1.56	54.60	0.88	0.40			55.00	"Pyrite" Vein 12' wide 10' long.
	S4	0.12	4.20	0.14	0.06			4.26	"Big Ledge" 16' surface outcrop
	S5	0.04	1.40	0.04	0.02			1.42	6' at West side of 16' looked better than remained.
	S6	0.005	0.18	0.08	0.04			0.22	Most southerly exposure Big Ledge 30' diag 12' actual
	S7	0.01	0.35	0.04	0.02			0.37	18' around nose same cut as S6
	S8	0.02	0.70	0.26	0.12			0.82	11' of ledge on "comb" about where vein splits.
	S9	0.01	0.35	Trace	----			0.35	20' of ledge on comb 80' SE of Stew. Tunnel
	S10	0.04	1.40	0.08	0.04			1.44	6' of quartzite brown into dr
	S11	0.01	0.35	0.08	0.04			0.39	3' True Fissure Vein-upper open cut
	S12	2.20	77.00	7.8	3.51			80.51	Pyrite&Quartz from above Portal S. Tunnel
	S13	0.005	0.18	0.08	0.04			0.22	Quartz from Stringer in Schist N.W. of Horne Tunnel.
	S14	0.64	22.40	0.64	0.29			22.69	Selected material outcrop small lense S. E. of Pinnacle.
	S15	0.16	5.60	2.9	1.31	9.1	8.55	15.46	Selected at stripping on Oldham No.3.
	S16	0.03	1.05	0.70	0.32			1.37	Qtz stringers at stripping on Oldham No.3
	S17	0.02	0.70	0.08	0.04			0.74	"Quartzite" Schist where S.10 take
	S18	Trace	----	0.08	0.04			0.04	Quartzite Schist shipped along bluff for 300'
	S19	0.005	0.18	0.10	0.05			0.23	Chips from boulders of Qtz. boulder patch.
	S20	0.24	8.40	12.5	5.63	2.43	22.84	36.87	Selected from "Galena Hill" cut.

Gold calculated at \$35.00 per ounce.
Silver calculated at \$1.45 per ounce.
Lead calculated at 4.7 per lb.

(Lead 2.43 Val. \$22.84 apparently an error).

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MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

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REPORT: RGEN0100

MINFILE NUMBER: 083D 004

NATIONAL MINERAL INVENTORY:

NAME(S): SUMMIT, AZURE RIVER GROUP, SUMMIT FRACTION,
SUMMIT 2-4, BUZZARD, RENFREW 1 FRACTION,
RENFREW 2 FRACTION, OLDHAM, OLDHAM 1-6,
OLDHAM 11-12, GRIZZLEY, HORNE

STATUS: Showing
NTS MAP: 083D12W
LATITUDE: 52 38 12
LONGITUDE: 119 50 32
ELEVATION: 1653 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Kamloops
UTM ZONE: 11
NORTHING: 5835429
EASTING: 307674

COMMENTS: Location of the Horne tunnel adit on the Summit claim group (Minister of Mines Annual Report 1929).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Tetrahedrite Arsenopyrite
Pyrite

COMMENTS: Significant minerals listed do not occur in ALL veins included in this mineral occurrence.

ASSOCIATED: Quartz Siderite
COMMENTS: Siderite occurs in many veins as a common constituent (Minister of Mines Annual Report 1938).

ALTERATION: Sericite
COMMENTS: Sericite likely represents digested remnants of schist inclusions (Minister of Mines Annual Report 1938).

ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Shear Discordant
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Irregular
DIMENSION: 76 x 6 Metres STRIKE/DIP: 040/ TREND/PLUNGE:
COMMENTS: Largest of three quartz veins, approximately 300 metres northwest of the Horne tunnel, is 76 metres long by 6 metres wide and strikes north 40 degrees east (Minister of Mines Annual Report 1929).

HOST ROCK

DOMINANT HOST ROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Hadrynian	Kaza	Undefined Formation	
Hadrynian	Cariboo	Isaac	
Proterozoic-Paleoz.			Shuswap Metamorphic Complex

LITHOLOGY: Quartz Sericite Schist
Quartzite
Quartz Vein
Quartz Pebble Conglomerate
Limestone Pebble Conglomerate
Limestone
Phyllite
Grit
Psammite

HOST ROCK COMMENTS: Late Proterozoic (Hadrynian) strata were deposited at some time during the interval 850 to 570 Ma (CJES Vol. 24, No. 2, pp. 302-313).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Cariboo Mountains

Cariboo
RELATIONSHIP:

GRADE: Greenschist
Amphibolite

RESERVES

MINFILE NUMBER: 083D 004

ORE ZONE: TUNNEL

CATEGORY: Assay
 SAMPLE TYPE: Chip
 COMMODITY _____ GRADE
 Silver 54.8600 Grams per tonne
 Gold 41.1400 Grams per tonne

YEAR: 1938

COMMENTS: Grades are for one (60 centimetre chip) of three samples taken from the Horne tunnel on the Summit 3 claim.
 REFERENCE: Minister of Mines Annual Report 1938.

CAPSULE GEOLOGY

The area around the headwaters of Azure River has claimed attention for several years on account of the discovery of large bodies of auriferous quartz in metasedimentary rocks of the Shuswap Metamorphic Complex. The Summit mineral showing is located on a ridge between the Azure River and Hobson Creek, approximately 7.6 kilometres south of the headwaters of the Azure River.

The Summit mineral showing lies near the contact between the Hadrynian Upper Kaza Group and the stratigraphically overlying Isaac Formation of the Hadrynian Cariboo Group. The ground covering the Summit mineralization is on the crest and northeast limb of a major anticline which plunges at a low angle to the northwest. The country rock is predominantly rusty weathering, quartz-sericite schist, striking west and dipping 70 degrees north. Lesser amounts of impure quartzite, pebble conglomerate and interbedded limestone of the Isaac Formation also occur. Lithologies of the Hadrynian upper Kaza Group consist of quartzo-feldspathic psammite, phyllite, slate and minor grit.

All the mineralization on the property is quartz-filled fissures containing pyrite, locally accompanied by galena, chalcopyrite, sphalerite, and rare amounts of tetrahedrite and arsenopyrite. Quartz veins all dip steeply and tend to strike one of four principal directions. The general structure strikes an average of 300 degrees. Other sets strike 330 to 340 degrees and 20 to 30 degrees. Those which strike 20 to 30 degrees are the most prominent as to size and most frequently contain sulphides. Those veins which are in quartzite, tend to have many branches that leave the parent in one or more sets and pinch out at 5 centimetres to 15 metres. All wide quartz veins terminate abruptly.

The quartz within veins is white and crystalline and sulphides are erratically distributed as scattered grains, as veins and as pockets and smears. Pyrite tend to be either intercrystalline with quartz or shattered and veined by quartz. Galena, sphalerite and chalcopyrite with associated gold are distinctly later than, and found as veinlets in, the pyrite. Siderite, light when fresh, weathers deep brown to reddish and occurs in many veins as a common constituent. Sericite is locally present and likely represents digested remnants of schist inclusions.

At the main showing, the Horne tunnel (adit) is driven back about 7.5 metres into the base of a ridge. Near massive sulphides, consisting of a fine assemblage of pyrite, sphalerite, chalcopyrite and galena, occur along segments of the adit walls. Other portions are lightly mineralized with pyrite. Disseminated mineralization occurs up to 30 centimetres into host schists. Three samples were taken from the adit area and assayed as follows (Minister of Mines Annual Report 1938).

SAMPLE	LOCATION	Au(g/t)	Ag(g/t)
1	east wall of adit 2.13 to 3.66 metres back from portal.	4.80	10.29
2	11 metres from portal; 60 centimetre chip sample.	41.14	54.86
3	3 metres above portal; 132 centimetre chip sample on surface.	10.29	10.29

Approximately 677 metres northwest along regional strike (100/70NE) of a major fold, three quartz masses crop out within 60 metres of each other. One of these, an open cut measuring 2.44 metres

RUN DATE: 05/05/93
RUN TIME: 15:32:58

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CAPSULE GEOLOGY

wide by 6.0 metres long, exposes considerable siderite and locally a little pyrite in quartz veins. Small outcrops of quartz extend for 61 metres to the northwest and 76 to 122 metres to the southeast. These outcrops of quartz stringers and veins host disseminated pyrite, galena and arsenopyrite. A sample from this open cut assayed 30.17 grams per tonne gold and 17.14 grams per tonne silver (Minister of Mines Annual Report 1938).

BIBLIOGRAPHY

EMPR AR 1919-N179; 1920-N168; *1923-A157; *1925-A171; *1926-A189;
*1927-C192; *1929-C221; *1930-A193; *1931-A107; 1933-A194;
*1938-D3-D17; 1939-107
EMPR BULL *1, p. 69
EMPR PF (Report by N.E. Nelson, 1936)
GSC SUM RPT 1926A; *1929A
GSC OF 2324
GSC P 86-1A, pp. 589-594; 87-1A, pp. 735-742
GSC MAP 15-1967; 1339A
CJES Vol. 14, No. 7, pp. 1690-1695; Vol. 24, No. 2, pp. 302-313

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DATE REVISED: 911128

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REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: 0830 004



PROVINCE OF
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MINISTRY OF
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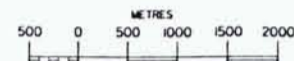
MINERAL TITLES REFERENCE

MAP 083D12W

U.T.M. ZONE II

LAST MAP UPDATE: 1992 APR 15

ORIGINAL PRODUCED AT 1:31680



ADMINISTRATIVE AREAS

MINING DIVISIONS: CARIBOO
KAMLOOPS

LAND DISTRICTS:

ALIENATIONS

- NO STAKING AREAS -----
- NO STAKING RESERVES
- PARKS
- ECOLOGICAL RESERVES
- RECREATION AREAS
- INDIAN RESERVES

CONDITIONAL AREAS

SUBJECT TO CONDITIONS RESERVES

SECTION 19 RECREATION AREAS

POST CLAIM AREAS

AREAS SUBJECT TO URANIUM / THORIUM
REGULATIONS ○

MINERAL TENURE

- MINERAL CLAIM =
- MINERAL LEASE =
- INDUSTRIAL MINERAL CLAIM =

CLAIM NAME	EXAMPLE
TITLE NUMBER	345679
OLD TITLE NUMBER	*3456*
TAG NUMBER	100000
LEGAL POST	○
WITNESS POST	●
FORFEITED TENURE	○
VERIFIED	✓
SURVEYED	✓
REVERTED C.G. MINERAL CLAIM	REV CG OR RCG
CROWN GRANTED	C G
OPEN FOR STAKING	O.F.S.

UNIT	2 POST CLAIM	OLD
1:50,000	1:50,000	1:50,000
500 m	500 m	500 m

THIS MAP IS PREPARED ONLY AS A GUIDE TO THE LOCATION OF MINERAL TENURE AS SHOWN ON THE LOCATOR'S SKETCHES. FOR CURRENT OR MORE SPECIFIC INFORMATION, APPLICATION SHOULD BE MADE TO THE MINING DIVISION CONCERNED.

083A06	08303W	08303E
083A09E	08302W	08302E
083A06E	08300W	08300E

INDEX TO ADJOINING MAPS

083D12W

