

812462

ZENITH MINING CORP. LTD

REPORT ON PROPERTY

LIARD MINING DIVISION

BRITISH COLUMBIA

94/K/6

SUMMARY:

The 50 claim holding of Zenith Mining Corp. Ltd is strategically located in a region which is focus for copper exploration, and two known orebodies in the immediate area, each in the 3-5% copper value range, and a good-sized copper mill exists locally.

The copper prolific area, some 100 miles west-south-west of Fort Nelson, Churchill Peak Area, North Central British Columbia, is characterized by quartz - carbonate veins with which high grade copper is regularly associated. A total of 97 copper occurrences are recognized in the region, including those of Churchill Copper Corp. Ltd., Davis - Keays Mining Co. Ltd., Windermere Exploration Ltd., Copperline Mines Ltd., Bralorne Pioneer Mines Ltd., and others.

Copper mineralization is often associated with north to northeast trending gabbroic dykes which weather in positive relief, and buff coloured alteration flanks most copper veins.

Based upon amount of exploration to date, the region has experienced considerable success by the locating of numerous copper occurrences.

Geologically, the subject property is excellently located in the centre of a broad area of Proterozoic meta-sedimentary uplift which has created faults, shears and fissures

for the copper mineralized quartz - carbonate veins to inhabit. Generally, the veins are strong persisting for many hundreds of feet horizontally, are persistent vertically, have good width and high percentage copper in the form of chalcopyrite. Abundant outcrop is represented in the region.

The Zenith Mining property is located generally on trend between two known areas of copper vein material respectively on the properties of Copperline Mines Ltd., and Windermere Exploration Ltd.

In view of findings to date, expenditures are warranted for a preliminary examination of Zenith Mining property to determine and assess the extent and degree of copper mineralization.

It is recommended initial exploratory steps take the form of a photogeological study in search of zones of weakness and dyke formation. This work would be followed by geological mapping with surface prospecting in the field utilizing helicopter reconnaissance and seasoned prospectors in search of quartz - carbonate - copper vein material by walking stream areas. Geochemical prospecting could be employed in overburden areas.

Costs of exploration are high due to location and

rugged topography. The estimated all-inclusive cost of the above noted work is \$22,500.00 if done in conjunction with other properties to be assessed in the region, or \$25,000.00 if done singly.

Further work would be contingent upon results of the preliminary program.

A handwritten signature in cursive script, appearing to read "G. L. Kirwan".

G. L. Kirwan

July 7, 1970

Zenith Mining Corp. Ltd.,
1770 - 777 Hornby Street,
Vancouver, B.C.

Gentlemen:

Your Company has acquired a single group comprising 50 contiguous mineral claims, about 2,500 acres in all, located in the Liard Mining Division Racing River Area, North Central British Columbia.

The property is strategically located in an area that is focus of attention in the search for copper concentrations.

This report is an appraisal of the economic mineral potential of the subject property and carries recommendations for preliminary work programs to test this potential from a mine-making point of view.

PROPERTY, LOCATION, ACCESS:

The 50 claim holdings of Zenith Mining Corp. Ltd. is located in the Liard Mining Division and numbered A 325-334; A 15-24; A 91-100; A 339-348, and A 359-368, all-inclusive,

form a contiguous block 10 claims wide east - west by 5 claims north - south. Coordinates of the top of the property are 58° 15' N. Lat., 125° 17' W. Long.

The claim group is located some 100 air miles west - southwest from Fort Nelson, British Columbia, encloses Churchill Peak, and is accessible by helicopter from mile 401, Alaska Highway, a distance of some 30 miles. A second route is offered via a secondary road from mile 401, Alaska Highway, past the mill site of Churchill Copper Corp. Ltd. onto the property of Copperline Mines Ltd., thence by helicopter onto the Zenith Mining holdings, a distance of 12 miles.

GEOLOGY:

According to G.S.C. Paper 67 - 68 and other geological references, the area of the property is underlain by Late Proterozoic slates, shales, calcareous shales, argillites, mudstones, and siltstones of the Tuchodi, Aida, and Gataga Formations forming a stratigraphic sequence some 15,000 ft. thick and trending roughly north to north - northwest.

Of economic importance are diabase to gabbro dykes standing up to 30 ft. in relief cutting all Proterozoic Formations steep dipping to vertical which truncate against overlying Early Cambrian units. Copper occurrences in the

region attend but are not necessarily associated with dykes, which are very persistent along strike with widths mostly from 10 ft., several being 100 ft. wide. North to north - north-east trending dykes and linears appear to be the most favourable for copper deposition. Copper appears as chalcopyrite blebs and disseminations in quartz - carbonite vein material with associated ankerite from one foot to eight feet in thickness, and regularly carry values in the 4-6% range.

Veins are associated with areas of weakness as faults, shears, and fracture areas, and are considered to be post-dyke. It is noteworthy for preliminary exploration that a zone of buff coloured alteration often appears on both sides of vein material.

Structurally, the Zenith Mining property is located along a Precambrian dome trending south - southeast from mile 436, Alaska Highway, for 60 miles having 40 miles as greatest width. It is believed fractures occurring in the metasediments at time of original uplift were laterally invaded by gabbroic dikes. A second set of fractures occurred at time of second generation uplift and quartz - carbonate veins with copper mineralization (pyrite lean) appear to have invaded these areas producing the economic copper occurrences that exist regionally today.

The altitude of the property is from 4500 ft. to 8,000 ft. A.S.L. with marked relief. The claim group is characterized by rugged topography and abundant steep sided mountains, rounded but narrow valleys, the area having been valley glaciated. Considerable rock exposure occurs in the region.

Table I. Table of Formations east of Gataga River.

Eon	Era		Rock-unit	Lithology	Thickness (feet)	
	Period					
Phanerozoic	Palaeozoic	Early Silurian	Nonda Formation	Dark grey dolomite and limestone, and white quartzite.		
		angular unconformity				
		Early Ordovician	Kechika Group	Light grey limestone, argillaceous limestone, and black shale.	2,000 to 5,000 *	
		angular unconformity				
		Early Cambrian	unnamed units	Conglomerates, red beds, limestone, dolomite and shale.	2,000 to 6,000 *	
angular unconformity						
Proterozoic	Helikian	Helikian ?	Diabase intrusions	Diabase dykes		
			Gataga Formation	Slaty-cleaved, dark grey mudstone, siltstone, and minor sandstone.	4,500 plus *	
			Aida Formation	Slaty-cleaved, light to medium grey mudstone, siltstone; minor chamositic and carbonaceous mudstone, dolomite, and limestone.	3,470 to 7,100 *	
			Tuchodi Formation	Quartzite, dolomite, and siltstone; minor red beds and shale.	5,000 *	
			Henry Creek Formation	Slaty-cleaved, dark grey calcareous mudstone, and siltstone; minor sandstone, and limestone.	700 * to 1,550	
			George Formation	Grey dolomitic limestone, limestone, and dolomite.	1,170 to 1,750	
			Tetsa Formation	Dark grey and black mudstone, siltstone, and sandstone; minor quartzite.	1,030 to 1,060	
		angular unconformity ?				
			Chischa Formation	Very light grey, brown, pink and green dolomite, and quartzite; minor siltstone.	3,100 *	

Approximate thickness

Source: G.S.C. Paper 67-68

ECONOMIC CONSIDERATIONS:

A total of 97 known copper occurrences, all vein type, occur in the region.

Churchill Copper Corp. Ltd., some 15 miles north of the Zenith Mining property have over two million tons of proven and probable ore grading between 3.6 to 4.01% copper produced from vein type material. Existing on this property is a copper mill rated at capacity 1000 T.P.D.

Immediately northwest of the Churchill orebody is that of Davis - Keays where a total proven - possible - inferred tonnage of 2,161,050 tons of vein material grading over 5% copper exists.

More recently, Windermere Exploration Ltd. (N.P.L.) which property exists immediately south of the subject Zenith Mining property, have discovered a number of interesting and persistent veins showing very high grade copper over excellent widths, according to recent sampling. Diamond drilling is scheduled to commence soon, and 5,000 ft. is planned for the Bronson veins to intersect the downdip extensions of the mineralized areas in order to prove mine - making potential.

Copperline Mines Ltd., located 12 miles northeast of Zenith Mining, have recently discovered two long, wide, quartz - carbonate, copper rich veins which are drill targets.

It is noteworthy that the subject Zenith Mining property is located stratigraphically on general trend between two excellent copper properties, Copperline and Windermere. Alteration material flanks most copper veins.

Based upon amount of exploration to date, the region has experienced considerable success by the locating of numerous copper occurrences.

Geologically, the subject property is excellently located in the centre of a broad area of Proterozoic metasedimentary uplift which has created faults, shears and fissures for the copper mineralized quartz - carbonate veins to inhabit. Generally, the veins are strong persistent vertically, have good width and high percentage copper in the form of chalcopyrite. Abundant outcrop is represented in the region.

CONCLUSIONS AND RECOMMENDATIONS:

The 50 claim holding of Zenith Mining Corp. Ltd. is stratigraphically located in a region which is focus for copper exploration, and two known orebodies exist in the immediate area, each in the 3-5% copper value range, and a good-sized copper mill

exists locally.

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Further work would be contingent upon results of
the preliminary program.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "G. L. Kirwan". The signature is written in dark ink and is positioned above the printed name.

G. L. Kirwan, B. Sc.

Vancouver, British Columbia

July 7, 1970

CERTIFICATE

I, GERALD L. KIRWAN of the cities of Toronto and Vancouver, certify as follows:

1. THAT I am a Geologist with offices at Ste. 205 - 160 Bay Street, Toronto, and Ste. 214 - 475 Howe Street, Vancouver, B.C.
2. THAT I have been graduated from Carleton University, B. Sc., 1957, and that I have practised my profession continuously.
3. THAT I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
4. THAT I have no interest direct or indirect in the property of Zenith Mining Corp. Ltd., nor do I beneficially own directly or indirectly any security of the Company or affiliates thereof.
5. THAT the accompanying report has been prepared by myself and is based upon study of pertinent government and corporate reports and maps such as G.S.C. Paper 67-68, G.S.C. Memoir 259, Windermere Exploration Ltd., Churchill Copper Corp. Ltd., Davis - Keays Mining Co. Ltd., and personal conversation with Consultants J. McIntyre, P. Eng., and B. Reeves, P. Eng., Cordilleran Engineering Ltd.
6. THIS report herein may be used in the prospectus of the Company and amendments thereto.

DATED at the City of Vancouver. in the Province of British Columbia, this 7th day of July, 1970.

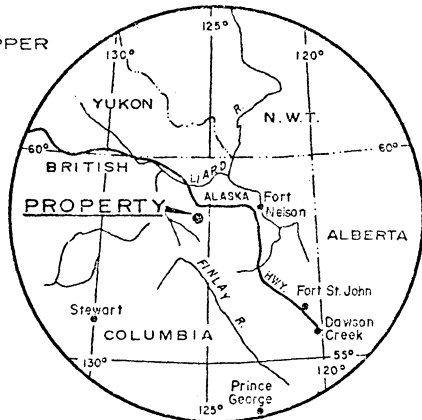


G. L. Kirwan

↑
DAVIS-KEAYS
20 miles

↑
125° 17'
CHURCHILL COPPER
15 miles

FORTUNE CHANNEL
LTD. HOLDINGS



A 333	A 334	A 23	A 24	A 99	A 100	A 347	A 348	A 367	A 368
A 331	A 332	A 21	A 22	A 97	A 98	A 345	A 346	A 365	A 366
A 329	A 330	A 19	A 20	A 95	A 96	A 343	A 344	A 363	A 364
A 327	A 328	A 17	A 18	A 93	A 94	A 341	A 342	A 361	A 362
A 325	A 326	A 15	A 16	A 91	A 92	A 339	A 340	A 359	A 360

58° 15'

7000

58° 15'

(WINDERMERE PROPERTY)

GEOLOGY:

LATE PROTEROZOIC (AND/OR CAMBRIAN) SEDIMENTS
CONSISTING OF SILTSTONES, SHALES, CALCAREOUS SHALES &
POSSIBLY CONGLOMERATE ESSENTIALLY OF THE TUCHODI,
AIDI AND GATACA FORMATIONS, ALL CUT BY HELIKIAN (?)
GABBRO DYKES. SOURCE G.S.C. PAPER 67-68.

ZENITH MINING CORP. LTD.
LOCATION & GEOLOGY MAP

LIARD MINING DIVISION
FORT NELSON AREA, B.C.

SCALE
0 4000 FEET
FEET 4000

G L. Kirwan, B Sc.

125° 17'